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Adolescent Births: A Statistical Profile

Massachusetts
1997

Supplement to Advance Data BIRTHS 1997

Massachusetts Department of Public Health
Bureau of Family and Community Health, Office of Statistics and Evaluation
Bureau of Health Statistics, Research and Evaluation

March 1999

The Commonwealth of Massachusetts
Executive Office of Health and Human Services
Department of Public Health
250 Washington Street, Boston, MA 02108-4619

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Governor

JANE SWIFT
Lt. Governor

WILLIAM D. O'LEARY
Secretary

HOWARD K. KOH, MD, MPH
Commissioner

April 5, 1999

Dear Colleague:

Enclosed is a copy of Adolescent Births: A Statistical Profile for Massachusetts 1997. This annually-produced report graphically summarizes statewide and selected community-level data related to births among Massachusetts adolescents. The report describes demographic and birth characteristics, birth outcomes, and prenatal care among Massachusetts adolescents in 1997.

This report on adolescent births serves as a companion to the annual Advance Data: Births 1997 report on all Massachusetts births generated by the MDPH Bureau of Health Statistics, Research, and Evaluation. Data on 1997 births in all 351 cities and towns in Massachusetts is also available in MassCHIP (MDPH's internet-accessed data warehouse). Information about MassCHIP and the reports are available at the MDPH website (http://www.magnet.state.ma.us/dph/).

We hope that these reports are, and will continue to be, useful resources for you in your efforts to improve the health and well-being of Massachusetts youth.

Sincerely yours,

Deborah Klein Walker

Deborah Klein Walker, Ed.D.
Assistant Commissioner
Bureau of Family and Community Health

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MASSACHUSETTS TEEN BIRTH FACT SHEET

1997

TEEN BIRTH RATE

- In 1997, there were a **total of 5,904 births to Massachusetts resident women under age 20, an increase of 55 births from the previous year.**[1]

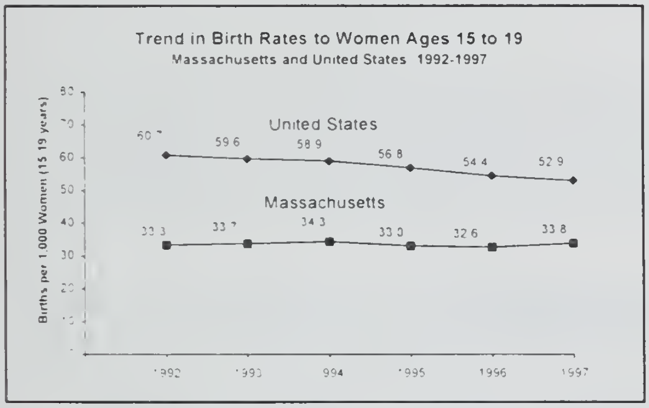
- The **1997 Massachusetts teen birth rate (births per 1,000 women ages 15-19 years) was 33.8.** As shown in the figure below, this rate was 64% of **the 1997 national rate (52.9)**[1,2]

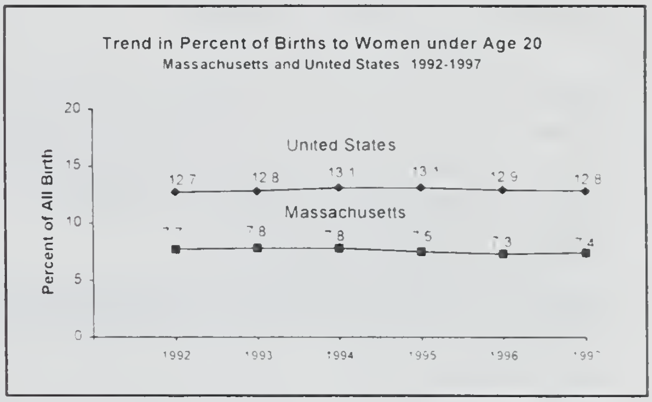
- **In 1996, only five other states had as low or lower overall teen birth rates than Massachusetts** (New Hampshire, Vermont, Maine, Minnesota, North Dakota). Massachusetts had the lowest birth rate among women aged 18-19 years.[3]

- The **teen birth rate in Massachusetts remained relatively stable between 1992 and 1997**, changing from **33.3 to 33.8** births per 1,000 women ages 15-19. The national teen birth rate showed a decline (12.8%) from 60.7 in 1992 to 52.9 in 1997.[1,2]

- **Consistently high teen birth rates in selected cities and towns have declined.** For the first time since Massachusetts teen birth rates have been reported, all of the 27 cities/towns with the highest number of teen births had a teen birth rate below 100, including Holyoke, Chelsea and Lawrence.

- In 1997, **7.4% of all births were to teen mothers (less than 20 years of age).** The Massachusetts percentage was **well below the 1997 national percentage (12.8%).**[1,2]





INFANT MORTALITY RATE

- The 1996 infant mortality rate (the death rate among infants less than one year old per 1,000 live births) for Massachusetts teen mothers was 8.0, compared to 4.7 for mothers ages 20 and older.[1] (*1996 is the most recent data available for infant mortality by mother's age.*)

- Among teens, the infant mortality rate varied by race/Hispanic ethnicity in 1996. The highest infant mortality rate was for black/non-Hispanic teens (12.3) followed by Hispanic teens (7.5) and white teens (7.1).[1]

PRENATAL CARE

- **In 1997, 64.6% of teen mothers started prenatal care in the first trimester** compared with 86.0% of older women. The current Massachusetts percentage of teen mothers is similar to the 1996 Massachusetts percentage (64.0%) and less than the national percentage for 1997 (67.6%). [1,4]

- **The percentage of teen mothers whose prenatal care was supported through public funds in 1997 was 68.8%,** virtually unchanged from 68.7% in 1996. In contrast, 20.9% of women ages 20 and older had prenatal care supported through public funds in 1997.[1]

LOW BIRTHWEIGHT

- In **1997, the percentage of low birthweight infants** born to Massachusetts teen mothers was **9.5%**, nearly equal to the national percentage of **9.6%**.[1,4,5]

- The occurrence of low birthweight infants born to teen mothers in Massachusetts continued to differ among racial and ethnic groups. The percentage of low birthweight infants was **lowest among white/non-Hispanic teens (7.8%) and highest among Asian teens (14.0%).** The percentage of low birthweight among **Hispanic and black/non-Hispanic teens was 9.9% and 12.6% respectively.** [1,3]

MARITAL STATUS

- In **1997, 90.4% of teen women giving birth were unmarried, virtually unchanged from 90.3% in 1996.** Massachusetts, like other states with low teen birth rates, had a higher percentage of unmarried teen mothers than the national average (78.1% in 1997).[1,4]

PATERNITY ACKNOWLEDGMENT

- Massachusetts has an active program (conducted jointly by the Department of Revenue and Department of Public Health) to promote paternity acknowledgment for out-of-wedlock births. In-hospital paternity acknowledgment for out-of-wedlock births **increased** between 1996 and 1997 among births to **younger unmarried teens (12-17 years old) from 59.6% to 62.5%** and among births to **older teens (18-19 years old) from 65.2% to 68.4%.**[1]

- Overall, the in-hospital paternity acknowledgment percentage continued to increase for births to women of all ages, **from 66.0% in 1996 to 69.9% in 1997. Since 1992, in-hospital paternity acknowledgment has increased over 45%.**[1]

Technical Note

Due to a recalculation of the Massachusetts population estimates in June 1997 by the Massachusetts Institute for Social and Economic Research, the teen birth rates for 1991-1995 given here are different from previously published rates for those years.

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[1] The Massachusetts Department of Public Health, 1997

[2] Ventura SJ, et al. Births and Deaths: Preliminary Data for 1997. National Vital Statistics Report, vol. 47 no. 4. National Center for Health Statistics, October 1998.

[3] Ventura SJ, et al. Report of Final Natality Statistics, 1996. National Vital Statistics Report; vol. 46 no. 11, supp. National Center for Health Statistics, 1998

[4] National Center for Health Statistics, unpublished preliminary data.

[5] Low birthweight: 2,500 grams or 5.5 pounds

Adolescent Births: A Statistical Profile

Massachusetts
1997

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Acknowledgments

This report was prepared by Elizabeth Brown, Rebecca Gaston Symons, Judy Weiss, Sion Kim Harris, Saul Franklin, and Mary Ostrem of the Office of Statistics and Evaluation, Bureau of Family and Community Health (BFCH). The report could not have been produced without assistance from and contributions by the following individuals: Deborah Klein Walker, Assistant Commissioner, BFCH; Marlene Anderka, Director, Office of Statistics and Evaluation, BFCH; Katherine Messenger, Director, Policy Office, BFCH; Dianne Hagan, Director, Adolescent and School Health, Division of Maternal, Child and Family Health, BFCH; Daniel Friedman, Assistant Commissioner, Bureau of Health Statistics, Research and Evaluation; Bruce Cohen, Zi Zhang and Abigail Averbach of the Bureau of Health Statistics, Research and Evaluation; Elaine B. Trudeau, Registrar, Vital Records and Statistics; and Kathleen Atkinson, Director of Health Policy Development. We also wish to acknowledge the valuable contribution of Kathy Kimball and Diane McCullough of the Office of Statistics and Evaluation.

This and other Massachusetts Department of Public Health publications can be accessed on the Internet at:

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To obtain additional copies of this report, contact the OSE secretary at:

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Foreword

Changes in birth data collection affecting information in *Adolescent Births: A Statistical Profile, Massachusetts 1997*[1]:

In 1996, Massachusetts implemented a major revision to the birth certificate form and, at the same time, installed in Massachusetts maternity hospitals a new Electronic Birth Certificate (EBC) system. As a result, Massachusetts natality data from 1996 onward will afford public health researchers, program planners, the health care community, and the public with vastly expanded information that more accurately reflects their needs and the times. The transition period affected several elements of the 1996 and 1997 data. As a result, not all elements can be compared precisely with data published in editions of this report prior to 1996. For this publication, various items in the 1997 dataset were recoded for consistency with the 1995 format. The most significant inconsistencies between 1997 and previous years include the following:

Adequacy of Prenatal Care: From 1986 to 1995, data elements for use in calculating the Kessner Adequacy Index were as follows: Month of Pregnancy that Prenatal Care Began (MPPCB), coded as 1-9, and Number of Prenatal Visits (NPV) adjusted by birthweight for premature infants. Hospitals were required to calculate the Month of Pregnancy from data available in medical and prenatal records. Since 1996, the data elements used to calculate the adequacy index are still MPPCB (1-9) and NPV. However, NPV is adjusted by Clinical Estimate of Gestation for premature infants rather than birthweight. Secondly, rather than have individual hospitals make determinations of MPPCB, the new birth certificate asks hospitals to report the precise Date of First Prenatal Care Visit (DFPCV). This increases the consistency of data collection across facilities and yields a more standardized calculation of MPPCB. Rather unexpectedly, however, there was a marked decline in the number of first trimester visits when DFPCV was used to determine the month as opposed to MPPCB. When comparing the adequacy index for 1995 and 1996, there is almost universal decline in state and hospital adequacy rates. **This decline is unlikely to reflect a significant actual decline, but rather a data adjustment due to more accurate data collection in 1996 and 1997. Due to this change in data collection, prenatal care data previous to 1996 should not be compared with 1996 or 1997 data. Prenatal care data for 1996 and 1997 are collected and recorded in the same manner and are comparable.**

Population Data: Population data used in this publication are based on revised estimates for 1991-1995 produced by the Massachusetts Institute for Social and Economic Research (MISER) in June 1997. Population estimates for 1996 and 1997 were produced by the Bureau of Health Statistics, Research and Evaluation by extrapolating from the MISER data. Crude birth rates, teen birth rates, and other age-specific birth rates for the years 1991 to 1995 are different from previously published rates for those years because of revisions made to the MISER estimates. **Birth rate data for the 1996 and 1997 reports may not be compared with data from reports**

---

[1] Adapted from the Technical Foreword in *Advance Data: Births 1997.*

published prior to 1996. All future reports of *Adolescent Births: A Statistical Profile* will use the most recently updated population data available from MISER. Final revised population estimates for 1991-1997 are scheduled to be completed by MISER in August 1999.

We apologize for any inconvenience these changes may cause. Ultimately, we feel these modifications will greatly enhance the quality, completeness, depth, and utility of the birth certificate data and this report. We are indebted to the Bureau of Health Statistics, Research and Evaluation for this explanatory foreword.

Additions to *Adolescent Births: A Statistical Profile, Massachusetts 1997:*

A new table has been added to this year's report. Table 23 provides information on the proportion of teenage mothers who were behind their expected grade level at the time of delivery by the race/Hispanic ethnicity of the mother. It is not possible to know how many of these young women left school before or after they got pregnant, or whether they were still in school, but behind grade level. For instance, due to language or educational differences, foreign-born youth may be placed in lower grades. See *Technical Notes* for an explanation of how level of educational attainment is calculated.

Revisions were made to definitions of "normal gestational age," "public" prenatal care payment source, and "educational attainment," which resulted in minor fluctuations in the data between 1996 and 1997. See Technical Notes for further explanation of these changes.

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Executive Summary

Introduction

Adolescent Births: A Statistical Profile, Massachusetts, 1997 is a supplement to the publication *Advance Data BIRTHS 1997,* and presents selected annual statistics and trend data on births among adolescent women in Massachusetts, as well as comparisons with national data. The four sections cover: demographic and birth characteristics and teen birth trends for the state as a whole; birthweight, gestational age, adequacy of prenatal care, infant mortality, smoking during pregnancy and mother's educational attainment; teen birth rates and birth characteristics for each of the 27 communities with the highest number of teen births in 1997; and teen birth characteristics for each of the 351 Massachusetts communities and for each of the 27 Community Health Network Areas (CHNAs). Teen births refer to births to resident Massachusetts women under 20 years old, unless specified otherwise. Massachusetts data are from the Registry of Vital Records and Statistics, Massachusetts Department of Public Health (MDPH). United States data are from the Centers for Disease Control and Prevention, National Center for Health Statistics (NCHS).

Overall, Massachusetts continues to have a low birth rate among women ages 15-19 years relative to most other states and the nation as a whole.[1] However, some Massachusetts communities have teen birth rates that are higher than the national rate. Moreover, there are still disparities across race/Hispanic ethnicity subgroups in relation to low birthweight prevalence, adequacy of prenatal care and infant mortality. The data presented in this profile are intended to present information that will assist those planning programs, provide evaluators and researchers with reference measures, and assist policy makers in their efforts to address adolescent health issues.

Summary

I. Statewide Demographic and Birth Characteristics

Number and Percentage of Births to Women under Age 20

- ✓ In 1997, 5,904 infants were born to women under age 20, 55 more births than the previous year. This was the first increase in eight years. Overall, since its peak in 1989, the number of births to teens has declined by 23.7%, whereas the number of births to all women in Massachusetts declined by 12.0%.

- ✓ The 1997 percentage of all Massachusetts births that were to women under age 20 was 7.4%. Massachusetts continued to have one of the lowest percentages in the nation and is well below the national 1997 percentage of 12.8%.[1]

---

[1] National Center for Health Statistics, U.S. Department of Health and Human Services.

Birth Rates among Women Ages 15-19[2]

✓ The 1997 Massachusetts teen birth rate was 33.8 births per 1,000 women ages 15-19. The teen birth rate changed little from the previous year, increasing slightly from 32.6 births per 1,000 15-19-year-old women. The 1997 teen birth rate has declined 5.8% since 1989, when it was at its highest point (35.9 per 1,000). The Massachusetts teen birth rate continued to be considerably lower than the national teen birth rate. The 1997 Massachusetts rate was 36.1% lower than the 1997 national rate of 52.9 per 1,000.

Age Distribution of Teen Mothers

✓ The overall distribution of teen births (births to women under age 20) by mother's age has varied little in the past several years, with 18 to 19 year old women accounting for just over 60% of all teen births. In 1997, over one-third (35.7%) of all teen births were among 15-17-year olds, and 1.7% were among teens under age 15.

Race/Hispanic Ethnicity Distribution of Teen Births

✓ In 1997, 2,865 (48.5%) of all teen births were to white non-Hispanic mothers; 1,807 (30.6%) were to Hispanic mothers; 794 (13.4%) were to black non-Hispanic mothers; 214 (3.6%) were to Asian mothers; and 205 (3.5%) were to mothers of Other race/ethnic groups.

✓ Between 1992 and 1997, the proportion of teen births that were to white non-Hispanic women decreased overall from 53.1% to 48.5%. The proportion of births that were to black non-Hispanic teens also showed a steady decline, from 15.8% to 13.4%. The proportions that were to Hispanic and Asian teen women increased during the same period, from 26.0% to 30.6% for Hispanics and from 2.7% to 3.6% for Asians. The proportion of births to Hispanic and Asian women of all ages also increased during this period.

Mother's Place of Birth

✓ More than one out of every five (22.5%) teen mothers in 1997 was born outside the fifty United States and D.C.; among older mothers (20 years and older); there was a slightly lower percentage (19.7%). These percentages differed more markedly within specific race/Hispanic ethnicity groups. Among Hispanic teen mothers, about half were born outside the U.S. (50.5%), compared to 70.4% of older Hispanic mothers.

✓ The percentage of mothers born outside the U.S. varied by race/Hispanic ethnicity within each maternal age group. Among teen births, the majority of black non-Hispanic mothers were born in the U.S. (86.9%) in contrast to Asian mothers, the majority of whom were born outside the U.S (79.0%). A similar pattern was seen among older mothers.

---

[2] Due to a revised estimation of the population count for 1991-1995, the teen birth rates for these years have been re-calculated. Therefore, the 1991-1995 teen birth rates published in the 1996 and 1997 reports should not be compared to those found in previous reports.

Previous Live Births

✓ In 1997, 18.0% of births to teens were to mothers with at least one prior live birth; 2.6% of teen births were to mothers with two or more prior live births. These percentages showed little change from 1996 (17.9% and 3.0%, respectively).

✓ The percentage of older teen mothers (18-19 years) who were multiparous (had at least one prior live birth) continued to decline slightly, from 22.7% in 1996 to 22.3% in 1997. There was a small increase in the percent of multiparous mothers among very young teens (12-17 years) (10.3% in 1996 to 10.8% in 1997).

Prenatal Care Payment Source

✓ The percentage of teen mothers whose prenatal care was supported through public funds was 68.8%, virtually unchanged from 1996 (68.7%). In contrast, only 20.9% of women 20 and older had their prenatal care supported through public funds in 1997 (similar to the 1996 figure, 20.4%).

Marital Status

✓ Of all teen women giving birth in 1997, 90.4% were unmarried. The percentage of births to unmarried teens has been growing steadily since 1980 when it was 56.9%. This trend is reflected among births to women age 20 and older as well; the percentage of births to unmarried, non-teen women doubled from 10.7% in 1980 to 20.6% in 1997.

In-Hospital Paternity Acknowledgment

✓ In-hospital paternity acknowledgment among teens increased from 62.8% in 1996 to 66.0% in 1997, and from 67.1% to 71.3% among births to adult women. Since 1992, there has been a 44.7% increase in paternity acknowledgment among teen births.

✓ The percentage of paternity acknowledgment for births to older unmarried teens (ages 18-19) increased from 65.0% in 1996 to 68.4% in 1997, while the corresponding percentage among younger unmarried teen women (ages 12-17) increased from 59.7% in 1996 to 62.5% in 1997.

✓ Paternity acknowledgment varied widely by race/Hispanic ethnicity, ranging from a high of 76.5% among white, non-Hispanic unmarried mothers of all ages to a low of 53.8% among black non-Hispanic unmarried mothers. However, paternity acknowledgment increased from 1996 among all race/Hispanic ethnic groups.

In-Hospital Paternity Acknowledgment and Father's Age

✓ Among all unmarried teen births with acknowledged paternity, 56.8% of the fathers were age 20 and older, 42.1% were between ages 20 and 24, and 12.7% were over age 25.

- ✓ Among unmarried teen mothers ages 16-17, the percentage of named fathers who were 20 and older increased from 41.8% in 1996 to 43.4% in 1997. Among 12-15 year old unmarried mothers, 25.7% of named fathers were 20 and older, a 9.8%increase from the 1996 percentage, 23.4% (1996 data not shown).

II. Birth Outcomes and Prenatal Care

Low Birthweight and Gestational Age

- ✓ The overall percentage of low birthweight (LBW) births to teen mothers changed little from 1996 to 1997 (9.4% to 9.5%). In 1997, the occurrence of low birthweight (LBW) among births to teens (ages 12-19) continued to differ across race/Hispanic ethnicity groups, with white non-Hispanic teens having the lowest percentages of LBW (7.8%). The 1997 LBW percentage among births to black non-Hispanic teens was 12.6%, and 9.9% among births to Hispanics.

- ✓ Overall, the proportion of low birthweight births among teen births was 39.7% higher than it was for births to adult women (9.5% vs. 6.8%). This ratio varied by race/Hispanic ethnicity. Low birthweight among births to black non-Hispanic teens in 1997 was only 13.5% higher than among births to black non-Hispanic adults (12.6% vs. 11.1%). Low birthweight among white non-Hispanic teens was 23.8% higher than among white non-Hispanic adult women (7.8% vs. 6.3%), while Asian teens had more than twice as high a percentage of low birthweight compared with adult Asian women (14.0% vs. 6.4%).

- ✓ The incidence of preterm birth (<37 weeks gestation) continued to be higher among teen births than among births to older women (8.7% vs. 7.1%), although the difference between teens and non-teens narrowed compared to 1996. This smaller gap is largely attributable to a decline in the percentage of preterm births among teen mothers (9.6% to 8.7%). Preterm birth among teen births was more common among infants of black non-Hispanic and Hispanic teens (11.3% and 10.2%, respectively) than among infants of white non-Hispanic teens (7.0%).

Prenatal Care

- ✓ In 1997, the overall percentage of teen mothers who received adequate prenatal care (first trimester registration and at least nine prenatal visits) was 59.2%, a slight decline from the previous year. Asian teens continued to have the lowest percentage of adequate prenatal care (41.0%) and white non-Hispanic teens the highest (63.8%).

- ✓ As in previous years, teen mothers were less likely than non-teen mothers to have received adequate prenatal care (59.2% vs. 81.8%) or prenatal care starting in the first trimester (64.6% vs. 86.0%).

Cesarean Sections

✓ In 1997, cesarean sections occurred less frequently among teen births (11.6%) than among births to women age 20 and older (20.4%).

Breastfeeding

✓ The percentage of teen mothers indicating either that they were breastfeeding their infant during their hospital stay or that they intended to breastfeed increased from 31.9% in 1990 to 51.4% in 1997. Over two-thirds (69.2%) of older mothers reported breastfeeding or intention to breastfeed in 1997.

Infant Mortality[3]

✓ Infant mortality rates (the number of infant deaths per 1,000 births) overall have declined since 1991 for both teen births and births to older women. The decline from 1991-1996 in the infant mortality rate (IMR) among births to teens was slightly higher than the decline among births to older women (25.2% vs. 23.0% decline, respectively). This trend was consistent across each race/Hispanic ethnicity group except Asians, for whom the numbers of deaths were too small to make a meaningful comparison

✓ The IMR among infants born to teens decreased from 1995 to 1996 among white non-Hispanics (from 7.8 to 7.1) and Hispanics (from 8.7 to 7.5). The IMR increased among births to black non-Hispanic teens (from 8.1 to 12.3); the 1996 rate exceeds the IMR among older black non-Hispanic women for the first time in 3 years.

✓ The infant mortality rate (IMR) in Massachusetts has been consistently lower than the national IMR for both teen births and births to older women. The IMR among Massachusetts teen births in 1996 was 23.8% lower than the IMR among U.S. teen births (8.0 vs. 10.5 deaths per 1,000 live births). Similarly, the IMR among 1996 births to older women in Massachusetts was 30.9% lower than for the nation (4.7 vs. 6.8 per 1,000 live births).

✓ The infant mortality rate (IMR) among normal birthweight infants (2,500 grams or more) was nearly twice as high for births to teen mothers as for births to adult mothers (3.1 vs. 1.6). The risk of infant mortality increases as birthweight declines, both among births to teens and non-teen mothers.

Smoking during Pregnancy

✓ As in 1996, more teen than adult mothers reported smoking during pregnancy in 1997 (21.4% vs. 11.6%). Between 1996 and 1997, the percentage of teen mothers who smoked during pregnancy decreased from 23.1% to 21.4%. The percentage of adult women who smoked also decreased slightly from 12.4% to 11.6%.

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[3] 1996 is the latest year that infant mortality data by mother's age were available. Infant mortality data that is not age-specific (i.e. infant mortality among births to mothers of *all* ages) is available for 1997. See Technical Notes for further explanation.

- ✓ Among teen mothers, white non-Hispanics had the highest prevalence of smoking (32.2%), almost three times that of the next highest race/ethnicity group, Asian, at 11.2%.

- ✓ Overall, the fewer cigarettes mothers smoked *prior* to pregnancy, the more likely they were to quit or reduce their level of smoking *during* pregnancy. This pattern was found among both teen and non-teen age groups.

Expected Educational Attainment

- ✓ In 1997, 29.7% of births to teens (< 20 years of age) were to women who were behind their expected grade level at school. The proportions of teens who were behind their expected grade level at school varied by race/Hispanic ethnicity. A greater proportion of Hispanic teen mothers were behind their expected grade level (40.0%) compared to Asians (29.4%), white non-Hispanics (26.6%), and black non-Hispanics (17.8%).

III. Birth Characteristics for Selected Massachusetts Communities

Statewide data can mask variation among individual communities. Each year the 25 cities and towns with the greatest number of births to teen mothers ages 12-19 are ranked by birth rate. In 1997, 27 communities were selected due to ties in the number of births.

Community Birth Rates[4]

- ✓ *Due to a revised estimation of the population count for 1991-1995, the teen birth rates for these years have been re-calculated. Therefore, the 1991-1995 teen birth rates published in the 1996 and 1997 reports should not be compared to those found in previous reports.*

- ✓ The five Massachusetts communities with the highest teen birth rates in 1997 were Holyoke (94.9 births per 1,000 Holyoke women ages 15-19 years), Chelsea (93.9), Revere (93.2), Southbridge (91.7), and Springfield (82.3). Twenty-four out of the 27 communities with the greatest number of teen births in 1997 were also among the top 26 in 1996.

- ✓ For the first time since Massachusetts teen birth rates have been reported, all of the top ranked cities/towns with the highest number of teen births had a teen birth rate below 100.

- ✓ **Race/Hispanic Ethnicity Distribution of Births**

- ✓ In three of the five communities with the highest teen birth rates, the majority of 1997 teen births were to Hispanic mothers. The exceptions were Revere and Southbridge. The percentages of younger teen mothers (< 18 years) who were Hispanic were 90.3% in Holyoke, 67.7% in Chelsea, 72.7% in Southbridge, and 63.3% in Springfield. Statewide, the largest proportion of younger teen (< 18 years) births were to white non-Hispanic mothers (40.4%), followed by Hispanic (36.1%), black non-Hispanic (14.9%) and Asian (4.8%) mothers.

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[4] Due to a revised estimation of the population count for 1991-1995, the teen birth rates for these years have been re-calculated. Therefore, the 1991-1995 teen birth rates published in the 1996 and 1997 reports should not be compared to those found in previous reports.

Low Birthweight (LBW)

✓ Among the 27 communities with the greatest number of 1997 teen births, the six communities with the highest percentages of LBW among teen births were Fitchburg (12.4%), Pittsfield (11.9%), Lowell (11.7%), Brockton (11.3%), Springfield (11.2%), and Boston (11.2%). These percentages are substantially higher than the state-wide percent LBW among teen births (9.5%) and among births to older women (6.8%).

Adequacy of Prenatal Care

✓ The five communities with the lowest percentages of adequate prenatal care for teen mothers were Methuen (40.4%), Leominster (44.4%), Westfield (47.5%), Barnstable (50.0%), and Lowell (50.7%). Overall, the state-wide percent of teen mothers receiving adequate prenatal care was 59.2%.

Previous Live Births (Parity)

✓ The statewide percentage of births to teen mothers who had at least one previous live birth was 18.0%. Among the 27 communities with the greatest number of teen births, the percentages of births among teens who had at least one previous live birth were highest in Leominster (37.8%) Southbridge (31.3%), Holyoke (31.0%), Lowell (28.5%), and Fitchburg (28.1%).

Expected Educational Attainment

✓ Among the 27 communities with the greatest number of teen births, the percentages of teen mothers who were one or more school grades behind were highest in Holyoke (40.8%), Southbridge (39.6%), Chelsea (38.0%), Fitchburg (37.1%), and Somerville (36.2%).

In-Hospital Paternity Acknowledgment

✓ In 1997, the state percentage of teen births for which paternity was acknowledged in-hospital was 66.0%, an increase from 1996 (62.8%). Boston had the lowest percentage (51.6%), as it did in 1996. However, this percentage represents an increase from 1996 (45.6%). Brockton (55.3%), Fitchburg (59.7%), Pittsfield (60.0%), and Cambridge (60.4%) also had relatively low percentages of in-hospital paternity acknowledgment among the 27 selected communities.

IV. Birth Characteristics for all 351 Communities and the 27 Community Health Network Areas (CHNA)

In this section, the following statistics are presented for each of the 351 cities/towns in Massachusetts and for each of the 27 CHNAs: the number of all births, the number of teen births by mother's age (< 18 years and < 20 years), the number of births among teen mothers (< 20 years) who started prenatal care in the first trimester, and the number whose prenatal care was paid for with public funds. The Community Health Network Areas aggregate all Massachusetts cities and towns into 27 groups for the purpose of tracking health status and implementing health improvement efforts. The community groupings were modified in 1996 and the data here reflect the new groupings (see Appendix for most recent CHNA city/town groupings).

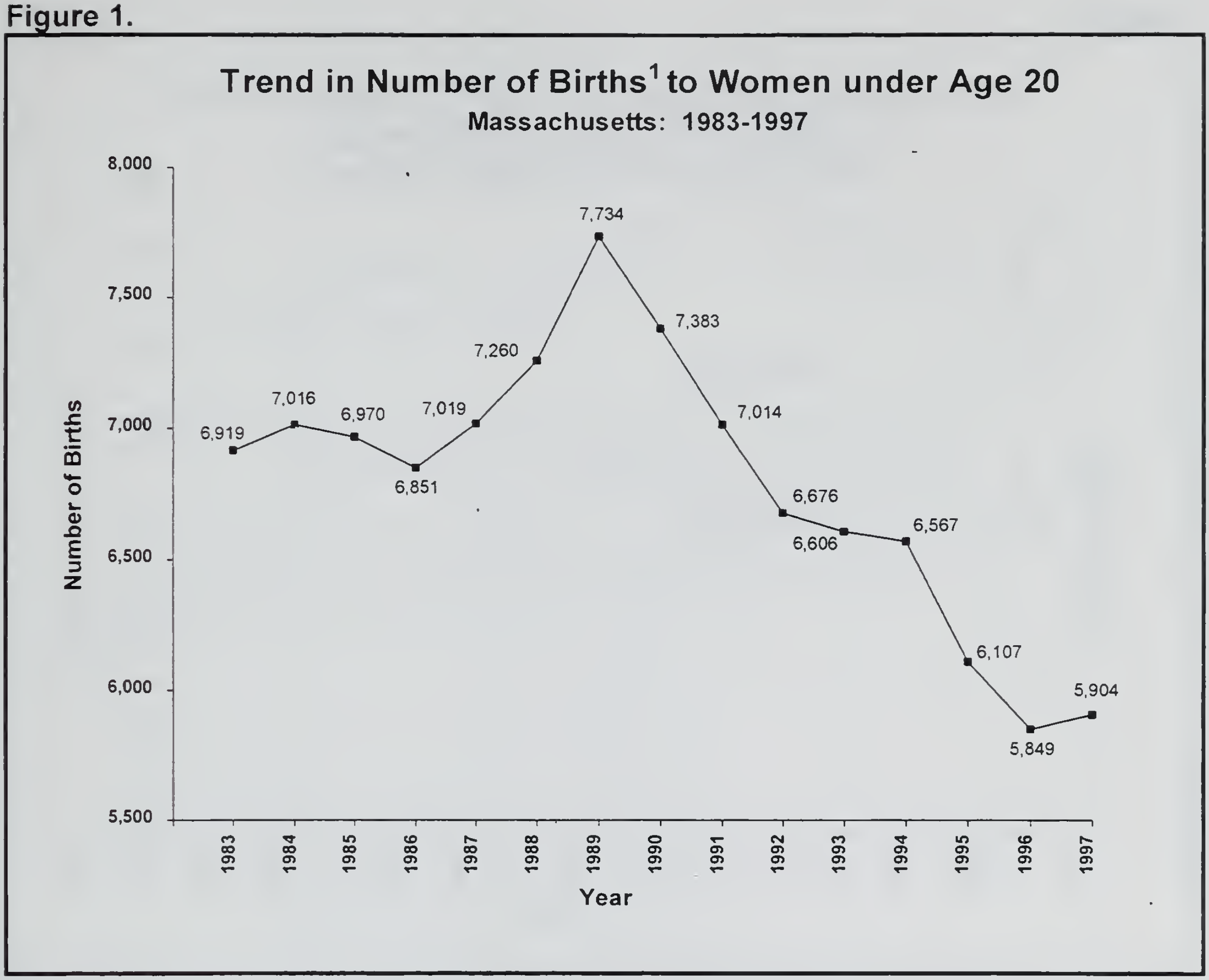
- ✓ In 1997, the Four (For) Communities Community Health Network area (Greater Holyoke) had the highest percentage of births that were to teens (15.2%, almost double the statewide percentage of 7.4%), followed by the Greater New Bedford (13.3%) and the Greater Lowell (13.1%) Community Health Network areas.

- ✓ In 1997, the lowest percentage of teen mothers receiving prenatal care starting in the first trimester (52.5%) was found in the North Shore Community Health Network area. The Greater Lowell Community Health Network area had the next lowest percentage (55.4%), followed by Partners for a Healthier Community (Greater Fall River area) (56.0%).

I.

Demographic and Birth Characteristics

Figure 1.



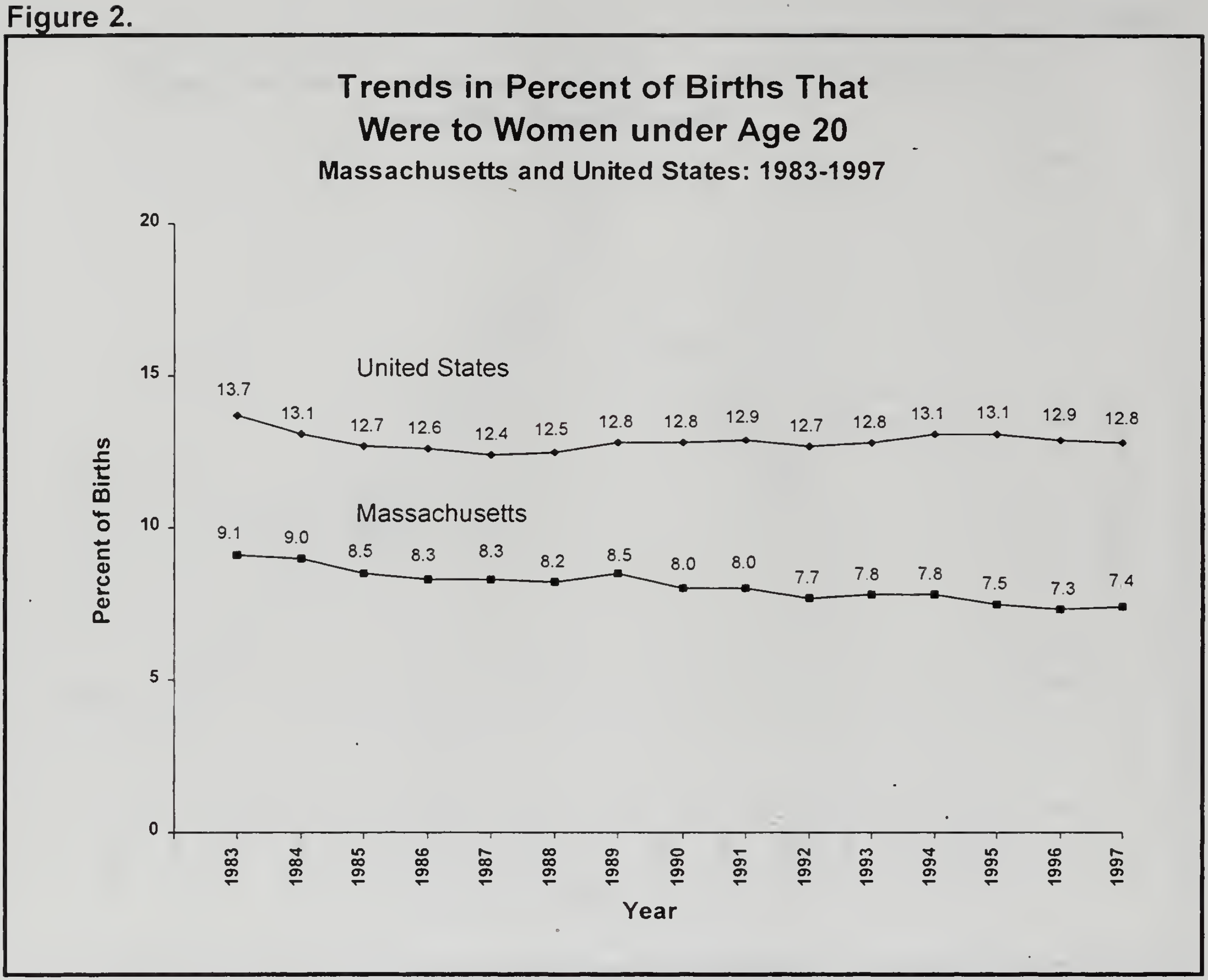
Source: Registry of Vital Records and Statistics, MDPH, 1983-1997.

[1] Live births to Massachusetts residents.

- In 1997, 5,904 infants were born to women under age 20, an increase of 55 births from the previous year.

- The 1997 number of teen births was the first increase since 1989. Since its peak in 1989, the number of births to teens has declined by 23.7%, whereas the number of births to all women in Massachusetts declined by 12.0% (data not shown).

Figure 2.



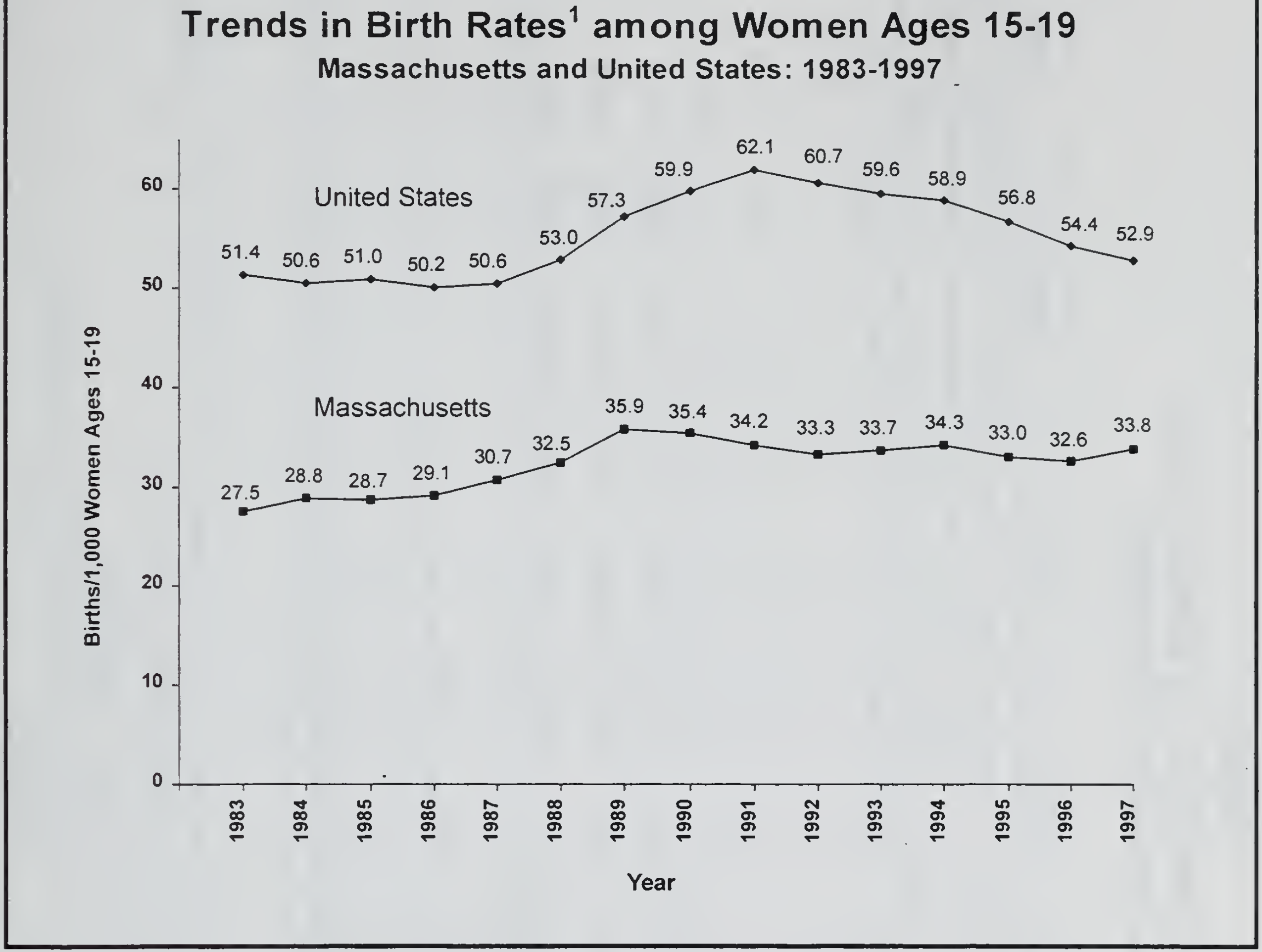
Sources: Registry of Vital Records and Statistics, MDPH, 1983-1997; National Center for Health Statistics (NCHS), 1983-1997. Please note that NCHS 1997 data are *preliminary.*

- In 1997, 7.4% of all births in Massachusetts were to women under age 20, changing little from the previous year (7.3%).

- Since 1983, the percentage of births that were to women under age 20 has decreased from 9.1% to 7.4%.

- In 1997, the percentage of Massachusetts births that were to teen mothers (7.4%) continued to be well below the 1997 national percentage of 12.8%.

Figure 3.



Sources: Registry of Vital Records and Statistics, MDPH, 1983-1997; National Center for Health and Statistics (NCHS), 1983-1997. Please note that the NCHS 1997 data are *preliminary*.

[1] Number of births per 1,000 women ages 15-19.

- The 1997 Massachusetts teen birth rate was 33.8 births per 1,000 women ages 15-19. The teen birth rate changed little from the previous year, increasing slightly from 32.6 births per 1,000 15-19 year old women. The 1997 teen birth rate has declined 5.8% since 1989, when it was at its highest point (35.9).

- The Massachusetts teen birth rate continued to be considerably lower than the national teen birth rate. The 1997 Massachusetts rate was 36.1% lower than the 1997 national rate (52.9/1,000 women ages 15-19).

- While the U.S. teen birth rate continued to be higher than the state's, the U.S. rate has shown a steadier and faster decline over the past 6 years. Between 1991 and 1997, the U.S. teen birth rate declined by 14.8%, while the Massachusetts state rate declined by 1.1%.

Table 1.
Trends in Teen Births by Mother's Age
Massachusetts: 1992-1997

Mother's Age	1992		1993		1994		1995		1996		1997	
	N	%	N	%	N	%	N	%	N	%	N	%
12-19	6,676	100.0	6,606	100.0	6,567	100.0	6,107	100.0	5,849	100.0	5,904	100.0
12-13	18	0.3	16	0.2	24	0.4	19	0.3	11	0.2	19	0.3
14	103	1.5	121	1.8	131	2.0	98	1.6	80	1.4	84	1.4
15	341	5.1	360	5.4	371	5.6	356	5.8	342	5.8	290	4.9
16	782	11.7	741	11.2	822	12.5	721	11.8	687	11.7	694	11.8
17	1,327	19.9	1,259	19.1	1,244	18.9	1,203	19.7	1,115	19.1	1,121	19.0
18	1,753	26.3	1,872	28.3	1,758	26.8	1,648	27.0	1,666	28.5	1,613	27.3
19	2,352	35.2	2,237	33.9	2,217	33.8	2,062	33.8	1,948	33.3	2,083	35.3

Source: Registry of Vital Records and Statistics, MDPH: 1992-1997.

- In 1997, 62.6% of all teen births were to women ages 18-19 years, 35.7% were to women ages 15-17 years, and 1.7% were to women under age 15.

- Overall, the age distribution of teen women giving birth has changed little in the last six years, with the proportion of teen births occurring among women under age 18 remaining below 40% (37.4%) in 1997.

- Compared to 1996, the percentage of 1997 teen births that were to 15-year-old women decreased from 5.8% to 4.9%, while the percentage of teen births that were to 19-year-old women increased from 33.3% to 35.3%.

Table 2.
Trends in Teen Births[1] by Mother's Race/Hispanic Ethnicity
Massachusetts: 1992-1997

Mother's Race/Ethnicity	1992		1993		1994		1995		1996		1997	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	6,676	100.0	6,606	100.0	6,567	100.0	6,107	100.0	5,849	100.0	5,904	100.0
White*	3,547	53.1	3,450	52.2	3,303	50.3	3,209	52.5	2,952	50.5	2,865	48.5
Black*	1,058	15.8	1,003	15.2	997	15.2	865	14.2	810	13.8	794	13.4
Hispanic	1,737	26.0	1,809	27.4	1,950	29.7	1,727	28.3	1,722	29.4	1,807	30.6
Asian*	178	2.7	180	2.7	188	2.9	163	2.7	164	2.8	214	3.6
Other*	147	2.2	156	2.4	126	1.9	134	2.2	155	2.7	205	3.5
Unknown	9	0.1	8	0.1	3	**	9	0.1	46	0.8	19	0.3

Source: Registry of Vital Records and Statistics, MDPH: 1992-1997.

* Non-Hispanic

** Calculations based on fewer than five events are excluded.

[1] Births to women ages 12-19.

- Approximately half of all 1997 teen births (<20 years of age) continued to be to white non-Hispanic women (48.5%). This proportion has declined from 53.1% in 1992.

- Between 1992 and 1997, the proportion of births that were to black non-Hispanic teens also showed a steady decline, from 15.8% to 13.4%. During the same period, the proportions that were to Hispanic and Asian teen women increased, from 26.0% to 30.6% for Hispanics and from 2.7% to 3.6% for Asians.

Table 3.
Teen Births by Mother's Age and Race/Hispanic Ethnicity
Massachusetts: 1997

Mother's Age	White*		Black*		Hispanic		Asian*		Other*		Unknown		Total	
	N	%[1]	N	%[1]	N	%[1]	N	%[1]	N	%[1]	N	%[1]	N	%[1]
< 20	2,865	100.0	794	100.0	1,807	100.0	214	100.0	205	100.0	19	100.0	5,904	100.0
18-19	1,972	68.8	464	58.4	1,011	55.9	108	50.5	129	62.9	12	63.2	3,696	62.6
16-17	783	27.3	268	33.8	612	33.9	80	37.4	66	32.2	6	31.6	1,815	30.7
12-15	110	3.8	62	7.8	184	10.2	26	12.1	10	4.9	1	**	393	6.7

Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Non-Hispanic

** Calculations based on fewer than five events are excluded.

[1] Percents are based on column totals. Percentages may not add up to 100 due to rounding.

- As seen in previous years, a lower proportion of white non-Hispanic teen births were to women under age 18 (31.2%) compared with the proportions among black non-Hispanic, Hispanic, or Asian teen births (41.6%, 44.1%, and 49.5%, respectively).

- Across race/ethnicity groups, there were slight changes from 1996 and 1997 in the proportion of births that were to younger teens (under age 18). The proportion of births that were to younger teens declined among white non-Hispanic women (from 33.2% to 31.2%) and declined slightly among Hispanic teen women (from 44.4% to 44.1%). The proportion of births to younger teens increased slightly among Asian women (48.8% to 49.3%) and among black non-Hispanic women (from 41.3 % to 41.6%) (1996 data not shown).

- The proportions of births to black non-Hispanic (7.8%), Hispanic (10.2%) and Asian (12.1%) women under age 16 in 1997 were more than twice as high as the proportion among white non-Hispanic women (3.8%).

- The proportion of births to 12-15-year-old teens decreased from the previous year among white non-Hispanic (from 4.9% to 3.8%) and black non-Hispanic births (from 9.6% to 7.8%); among Hispanic births, this proportion was virtually unchanged (from 10.1 to 10.2%)(1996 data not shown).

Table 4.
Births by Mother's Race/Hispanic Ethnicity and Age
Massachusetts: 1997

Mother's Race/Ethnicity	Under 18 Years		18 to 19 Years		Under 20 Years		20 Years & Older		All Ages[1]	
	N	%[2]	N	%[2]	N	%[2]	N	%[2]	N	%[2]
Total Births	2,208	100.0	3,696	100.0	5,904	100.0	74,414	100.0	80,321	100.0
White*	893	40.4	1,972	53.4	2,865	48.5	58,277	78.3	61,143	76.1
Black*	330	14.9	464	12.6	794	13.4	4,663	6.3	5,457	6.8
African-American	278	12.6	368	10.0	646	10.9	2,640	3.5	3,286	4.1
West Indian	14	0.6	26	0.7	40	0.7	466	0.6	506	0.6
Haitian	14	0.6	34	0.9	48	0.8	817	1.1	865	1.1
Other Black	24	1.1	36	1.0	60	1.0	740	1.0	800	1.0
Hispanic	796	36.1	1,011	27.4	1,807	30.6	6,403	8.6	8,211	10.2
Puerto Rican	613	27.8	696	18.8	1,309	22.2	3,068	4.1	4,377	5.4
Dominican	86	3.9	127	3.4	213	3.6	1,189	1.6	1,402	1.7
Central Amer.	47	2.1	94	2.5	141	2.4	974	1.3	1,115	1.4
Other Hispanic	50	2.3	94	2.5	144	2.4	1,172	1.6	1,317	1.6
Asian*	106	4.8	108	2.9	214	3.6	3,662	4.9	3,876	4.8
Vietnamese	16	0.7	34	0.9	50	0.8	590	0.8	640	0.8
Cambodian	57	2.6	37	1.0	94	1.6	395	0.5	489	0.6
Other SE Asian	13	0.6	9	0.2	22	0.4	114	0.2	136	0.2
Chinese	5	0.2	8	0.2	13	0.2	1,121	1.5	1,134	1.4
Other Asian	15	0.7	20	0.5	35	0.6	1,442	1.9	1,477	1.8
Other*	76	3.4	129	3.5	205	3.5	1,222	1.6	1,427	1.8
Unknown	7	0.3	12	0.3	19	0.3	187	0.3	207	0.3

Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Non-Hispanic

[1] "All Ages" includes mothers of unknown age.

[2] Percentages are based on column totals. Percentages may not add up to 100 due to rounding.

- In 1997, the proportions of births that were to black non-Hispanic and Hispanic teens (13.4% and 30.6%, respectively) were considerably higher than the proportions of births to non-teen mothers of those race/Hispanic ethnicity groups (6.3% for black non-Hispanic women and 8.6% among Hispanic women).

- Among teens younger than 18 years old, the proportion of white non-Hispanic births was considerably lower (40.4%) than the proportion among 18-19-year-old teens (53.4%). The reverse was true for black non-Hispanic, Hispanic and Asian births: the proportions of each were higher among births to younger teens (<18 years of age) and lower among births to older teen births (18-19 years of age).

- Over 1 out of 5 births to teens (<20 years of age) were to Puerto Rican women (22.2%), by far the largest single ethnic group among teen births.

- Puerto Rican women accounted for a greater proportion of Hispanic births among births to teens than among births to non-teens (72.4% vs. 47.9%, respectively).

Table 5.
Births by Mother's Age, Place of Birth, and Race/Hispanic Ethnicity
Massachusetts: 1997

Mother's Race/Ethnicity	Under 20 Years				20 Years and Older			
	United States[1]		Other[2]		United States[1]		Other[2]	
	N	%[3]	N	%[3]	N	%[3]	N	%[3]
Total Births	4,566	77.5	1,329	22.5	59,488	80.3	14,581	19.7
White*	2,782	97.3	78	2.7	54,079	93.1	3,999	6.9
Black*	688	86.9	104	13.1	2,708	58.6	1,910	41.4
African Amer.	635	98.6	9	1.4	2,517	95.7	114	4.3
West Indian	15	37.5	25	62.5	43	9.5	412	90.5
Haitian	6	12.5	42	87.5	29	3.6	787	96.4
Other Black	32	53.3	28	46.7	119	16.6	597	83.4
Hispanic	902	50.0	903	50.0	1,860	29.1	4,533	70.9
Puerto Rican	727	55.5	582	44.5	1,361	44.4	1,706	55.6
Dominican	62	29.1	151	70.9	114	9.6	1,074	90.4
Central Amer.	23	16.4	117	83.6	52	5.3	920	94.7
Other Hispanic	90	62.9	53	37.1	333	28.6	833	71.4
Asian*	45	21.0	169	79.0	294	8.2	3,296	91.8
Vietnamese	8	16.0	42	84.0	4	**	586	99.3
Cambodian	5	5.3	89	94.7	7	1.8	387	98.2
Other SE Asian	6	27.3	16	72.7	3	**	111	97.4
Chinese	5	38.5	8	61.5	122	11.3	959	88.7
Other Asian	21	60.0	14	40.0	158	11.2	1,253	88.8
Other*	136	66.3	69	33.7	419	34.7	789	65.3
Unknown	13	68.4	6	31.6	128	70.3	54	29.7

Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Non-Hispanic

** Calculations based on fewer than five events are excluded.

[1] United States includes the 50 states and the District of Columbia.

[2] Rest of the world, including Puerto Rico and U.S. territories.

[3] Percentages are based on known maternal country of origin; percentages are calculated on row totals within each age category.

- More than one out of every five (22.5%) teen mothers in 1997 was born outside the fifty United States and the District of Columbia; among older mothers (20 years and older), there was a slightly lower percentage (19.7%).

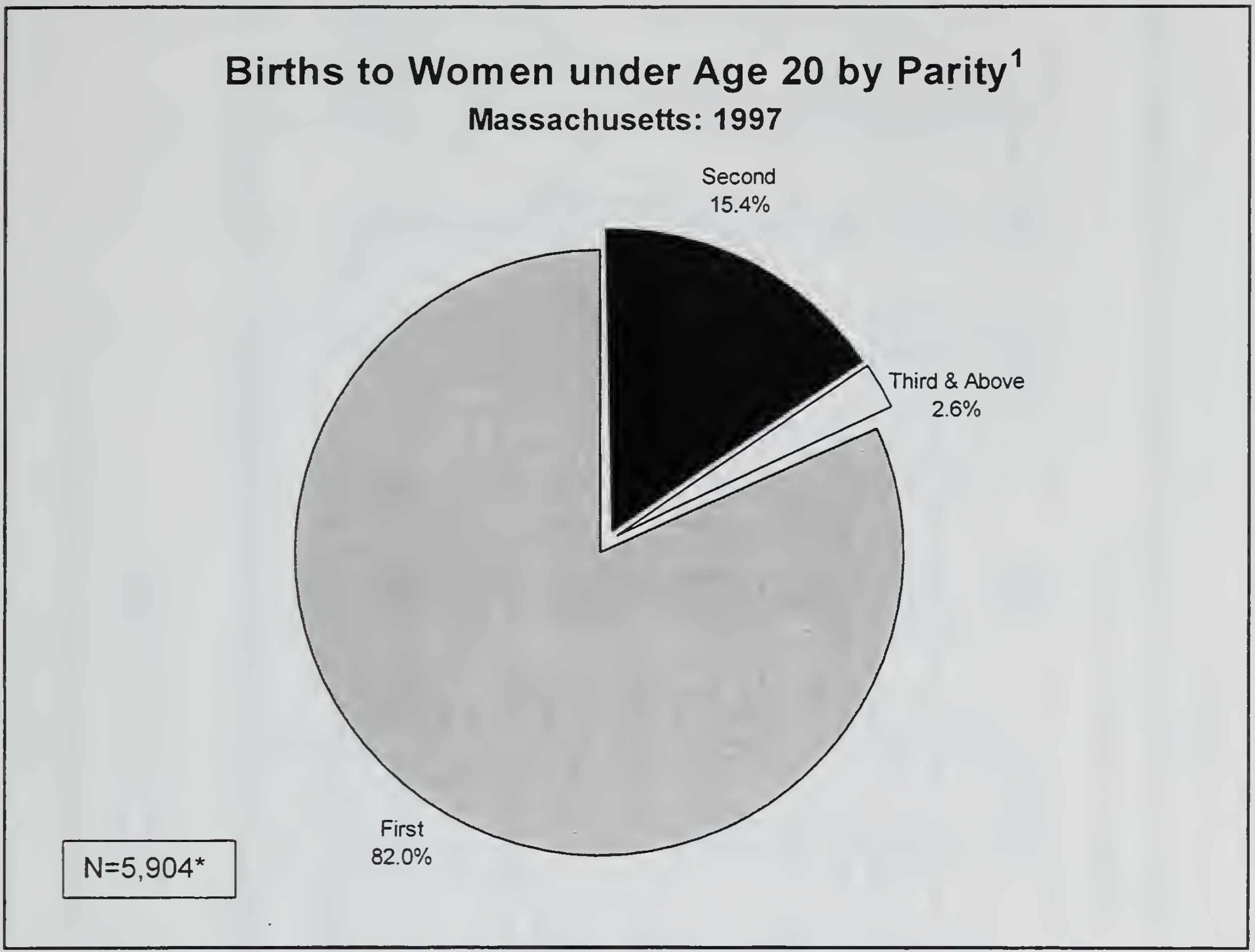
- The percentage of mothers born outside the U.S. varied by race/Hispanic ethnicity within each maternal age group. Among teen births, the majority of black non-Hispanic mothers were born in the U.S. (86.9%), in contrast to Asian teen mothers, the majority of whom were born outside the U.S (79.0%). A similar pattern was seen among older mothers.

- Half of Hispanic teen mothers were born outside the U.S. (50.0%). In contrast, 70.9% of older Hispanic mothers were born outside the U.S.

- Regardless of age, there was variation in the proportion of mothers born outside the U.S. across ethnic subgroups. Dominican and Central American women were more likely to have been born outside of the U.S. than Puerto Rican women. Similarly, West Indian and Haitian women were more likely to have been foreign-born compared to African-American mothers.

- Compared with the previous year, the proportion of Asian teen mothers who were born outside the U.S. decreased from 85.3% to 79.0% (1996 data not shown).

Figure 4.



Births to Women under Age 20 by Parity[1]

Massachusetts: 1997

Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Percentages are based on births with known parity.

- In 1997, 18.0% of births to teens were to mothers with at least one prior live birth; 2.6% of teen births were to mothers with two or more prior live births live births. These figures showed little change from corresponding 1996 data (17.9% and 3.0%, respectively).

Table 6.
Births to Multiparous[1] Mothers by Mother's Race/Hispanic Ethnicity and Age
Massachusetts: 1997

Multiparous Mother's Age	White*		Black*		Hispanic		Asian*		Other*		Unknown		Total	
	N	%[2]	N	%[2]	N	%[2]	N	%[2]	N	%[2]	N	%[2]	N	%[2]
All Ages[3]	34,179	55.9	3,288	60.3	4,850	59.1	1,933	49.9	710	49.8	63	30.4	45,023	56.1
20 +	33,812	58.0	3,141	67.4	4,377	68.4	1,893	51.7	680	55.6	58	31.0	43,961	59.1
< 20	367	12.8	147	18.5	473	26.2	40	18.7	30	14.6	5	26.3	1,062	18.0
18-19	312	15.8	106	22.8	350	34.6	28	25.9	24	18.6	4	**	824	22.3
12-17	55	6.2	41	12.4	123	15.5	12	11.3	6	7.9	1	**	238	10.8

Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Non-Hispanic

** Calculations based on fewer than five events are excluded.

[1] Multiparous women have had at least one previous live birth.

[2] Percentages are based on the total number of births in each race/Hispanic ethnicity-age group (data not shown).

[3] "All Ages" includes mothers of unknown age.

- The percentage of older teen mothers (ages 18-19) who had at least one prior live birth continued to decline, though slightly, from 22.7% in 1996, to 22.3% in 1997. The percentage of multiparous mothers among younger teens (12-17) rose slightly, from 10.3% in 1996, to 10.8% in 1997 (1996 data not shown).

- In 1997, more than one out of four births to Hispanic teen women (26.2%) were to mothers who already had at least one previous live birth.

Table 7.
Births by Mother's Race/Hispanic Ethnicity, Age, and Prenatal Care Payment Source
Massachusetts: 1997

Mother's	12 to 17 Years		18 to 19 Years		Under 20 Years		20 Years & Older		All Ages[1]	
Race/Ethnicity	N[2]	%[3]	N[2]	%[3]	N[2]	%[3]	N[2]	%[3]	N[2]	%[3]
Total Births[3]	2,207	100.0	3,688	100.0	5,895	100.0	74,309	100.0	80,206	100.0
Public[4]	1,486	67.3	2,570	69.7	4,056	68.8	15,550	20.9	19,607	24.4
Private[5]	615	27.9	973	26.4	1,588	26.9	55,648	74.9	57,236	71.4
White*	893	100.0	1,971	100.0	2,864	100.0	58,242	100.0	61,107	100.0
Public	472	52.9	1,173	59.5	1,645	57.4	7,748	13.3	9,393	15.4
Private	375	42.0	712	36.1	1,087	38.0	48,047	82.5	49,134	80.4
Black*	330	100.0	463	100.0	793	100.0	4,652	100.0	5,445	100.0
Public	233	70.6	366	79.0	599	75.5	2,321	49.9	2,920	53.6
Private	82	24.8	86	18.6	168	21.2	2,158	46.4	2,326	42.7
Hispanic	796	100.0	1,009	100.0	1,805	100.0	6,399	100.0	8,205	100.0
Public	649	81.5	838	83.1	1,487	82.4	4,021	62.8	5,509	67.1
Private	113	14.2	131	13.0	244	13.5	2,136	33.4	2,380	29.0
Asian*	106	100.0	108	100.0	214	100.0	3,658	100.0	3,872	100.0
Public	82	77.4	90	83.3	172	80.4	847	23.2	1,019	26.3
Private	22	20.8	18	16.7	40	18.7	2,697	73.7	2,737	70.7
Other*	76	100.0	129	100.0	205	100.0	1,219	100.0	1,424	100.0
Public	48	63.2	100	77.5	148	72.2	587	48.2	735	51.6
Private	20	26.3	23	17.8	43	21.0	567	46.5	610	42.8

Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Non-Hispanic

[1] "All Ages" includes mothers of unknown age.

[2] Only births with known prenatal care payor source are included.

[3] Percentages are based on race/Hispanic ethnicity totals. Percentages for "Public" and "Private" do not add up to 100 because the total includes "Other" sources (Workers Compensation and self pay. Data not shown).

[4] Public: Mass Health (Medicaid), Medicare, Healthy Start, free care and other government programs. Free care was included in this category for the first time in1997 (see Technical Notes); therefore, these data are not comparable with prior reports.

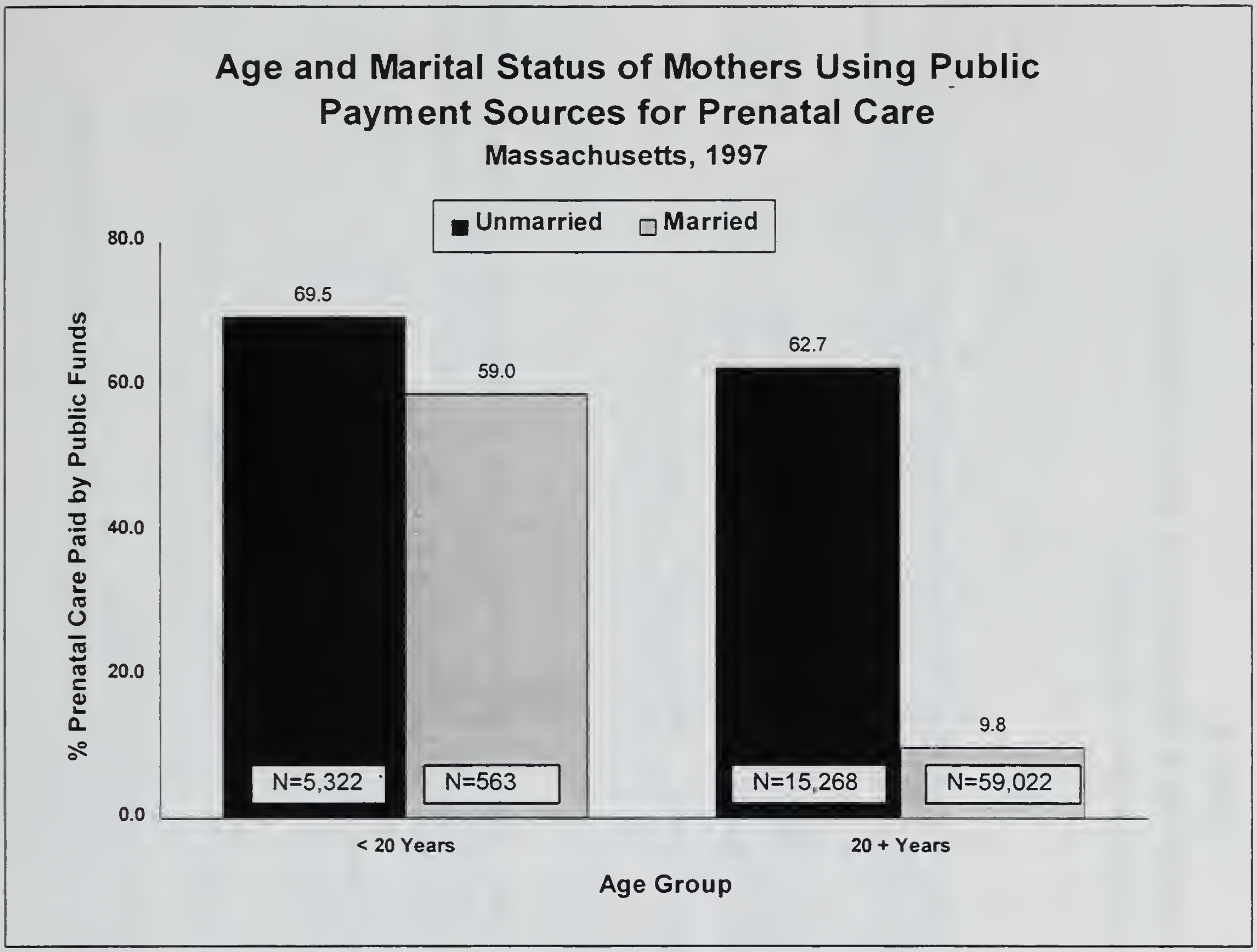
[5] Private: Blue Cross/Blue Shield, other commercial insurance, and HMO. "HMO" may include Mass Health (Medicaid) recipients in managed care programs.

- The percentage of teen mothers whose prenatal care was supported through public funds was 68.8%. In contrast, only 20.9% of women 20 and older had their prenatal care supported through public funds in 1997.

- Among teen mothers, the percentage receiving publicly funded prenatal care varied by race/Hispanic ethnicity: 57.4% of white non-Hispanic teen mothers, 75.5% of black non-Hispanic teen mothers, 82.4% of Hispanic teen mothers, and 80.4% of Asian teen mothers received publicly funded prenatal care.

- Compared with teen mothers, the percentage of non-teen mothers who received publicly-funded prenatal care was lower within each race/Hispanic ethnicity group. The difference between teens and non-teens was most pronounced among Asian mothers (80.4% and 23.2%, respectively), and least pronounced among Hispanic mothers (82.4% and 62.8%, respectively).

Figure 5.



Source: Registry of Vital Records and Statistics, MDPH, 1997.

- In 1997, 69.5% of unmarried teen mothers and 59.0% of married teen mothers received publicly-funded prenatal care. The unmarried teen figure changed little from 1996 (69.6%); the figure for married teens decreased from the previous year (62.2%). The contrast was much greater among adult mothers, with 62.7% of unmarried adult mothers having received publicly-funded prenatal care and only 9.8% of married adult mothers having received publicly-funded prenatal care. Both of these figures changed little from their corresponding 1996 numbers, 62.6% and 9.6%, respectively (1996 data not shown).

Table 8.
Trends in Births to Unmarried Mothers by Age of Mother
Massachusetts: 1992-1997

Unmarried Mother's Age	1992		1993		1994		1995		1996		1997	
	N	%[1]	N	%[1]	N	%[1]	N	%[1]	N	%[1]	N	%[1]
All Ages[2]	22,612	25.9	22,345	26.4	22,302	26.6	20,857	25.6	20,429	25.5	20,640	25.7
20 +	16,750	20.8	16,462	21.1	16,416	21.3	15,370	20.4	15,147	20.4	15,300	20.6
< 20	5,862	87.8	5,883	89.1	5,886	89.6	5,487	89.9	5,282	90.3	5,339	90.4
18-19	3,462	84.3	3,515	85.5	3,433	86.4	3,210	86.5	3,145	87.0	3,216	87.0
12-17	2,400	93.4	2,368	94.8	2,453	94.6	2,277	95.0	2,137	95.6	2,123	96.2

Source: Registry of Vital Records and Statistics, MDPH, 1992-1997.

[1] Percentages are based on total number of births within each category.

[2] "All Ages" includes mothers of unknown age.

- The 1997 percentage of all Massachusetts births that were to unmarried women (25.7%) showed little change from 1996 (25.5%). The peak year was 1994, with 26.6% of all births occurring among unmarried women. Among teens, the percentage of births that were to unmarried women also showed little change between 1996 and 1997 (90.3% to 90.4%).

- In 1997, 96.2% of births to mothers ages 12-17 were to unmarried women, compared with 95.6% in 1996.

Table 9.
Births to Unmarried Mothers by Mother's Race/Hispanic Ethnicity and Age Massachusetts: 1997

Unmarried Mother's Age	White*		Black*		Hispanic		Asian*		Other*		Unknown		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
All Ages[1]	11,005	18.0	3,260	59.7	4,970	60.5	704	18.2	635	44.5	66	33.0	20,640	25.7
20+	8,424	14.5	2,490	53.4	3,369	52.6	512	14.0	457	37.4	48	26.5	15,300	20.6
< 20	2,581	90.1	770	97.0	1,600	88.5	192	89.7	178	86.8	18	94.7	5,339	90.4
18-19	1,717	87.1	441	95.0	848	83.9	92	85.2	107	82.9	11	91.7	3,216	87.0
12-17	864	96.8	329	99.7	752	94.5	100	94.3	71	93.4	7	100.0	2,123	96.2

Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Non-Hispanic

[1] "All Ages" includes mothers of unknown age.

- The overall percentage of births to unmarried mothers varied substantially by race/Hispanic ethnicity in 1997, as it has in previous years. Among births to women of all ages, 18.0% of white non-Hispanic women were unmarried, while 59.7% of black non-Hispanic, 60.5% of Hispanic women, and 18.2% of Asian women were unmarried.

- There is considerably less variation in marital status by race/Hispanic ethnicity among teen mothers (< 20 years of age); 90.1% of white non-Hispanic teen mothers were unmarried, while 97.0% of black non-Hispanic, 88.5% of Hispanic, and 89.7% of Asian teen mothers were unmarried.

Table 10.
Trends in In-Hospital Paternity Acknowledgment[1] by Age of Unmarried Mother
Massachusetts: 1992-1997

Unmarried Mother's Age	1992		1993		1994		1995		1996		1997	
	N	%	N	%	N	%	N	%	N	%	N	%
All Ages[2]	10,874	48.1	11,329	50.7	11,904	53.4	12,223	58.6	13,195	66.0	14,433	69.9
20+	8,192	48.9	8,487	51.6	8,944	54.5	9,251	60.2	9,939	67.1	10,906	71.3
< 20	2,682	45.6	2,842	48.3	2,960	50.3	2,972	54.2	3,256	62.8	3,526	66.0
18-19	1,631	47.1	1,812	51.6	1,785	52.0	1,833	57.1	1,999	65.0	2,199	68.4
12-17	1,051	43.8	1,030	43.5	1,175	47.9	1,139	50.0	1,257	59.7	1,327	62.5

Source: Registry of Vital Records and Statistics, MDPH, 1992-1997.

[1] Paternity acknowledgment: voluntary self-acknowledgment by fathers or acknowledgment through legal action. This table reflects data collected in hospitals, at time of birth only (see Glossary for further explanation).

[2] "All Ages" includes mothers of unknown age.

- The overall percentage of births to unmarried women with paternity acknowledgment in the birth hospital continued to increase, from 66.0% in 1996 to 69.9% in 1997. Between 1992 and 1997, in-hospital paternity acknowledgement of births to women of all ages has increased by 45.3%.

- Paternity acknowledgment occurred at a lower rate among unmarried teens than among unmarried adults. However, both groups have experienced consistent increases in paternity acknowledgment from 1992 through 1997. Paternity acknowledgment among births to adults increased from 67.1% in 1996 to 71.3% in 1997, while acknowledgment among teens increased from 62.8% in 1996 to 66.0% in 1997.

- An increase in paternity acknowledgment for infants born to unmarried teens occurred among both young teen mothers (12-17 years old) and older teens (18-19 years old). The percentage of paternity acknowledgment for births to older unmarried teens increased from 65.0% in 1996 to 68.4% in 1997, while the corresponding percentage among younger unmarried teen women increased from 59.7% in 1996 to 62.5% in 1997.

Table 11.
In-Hospital Paternity Acknowledgment[1] by Unmarried Mother's Race/Hispanic Ethnicity and Age
Massachusetts: 1997

Unmarried	White*		Black*		Hispanic		Asian*		Other*		Unknown		Total	
Mother's Age	N	%[2]	N	%[2]	N	%[2]	N	%[2]	N	%[2]	N	%[2]	N	%[2]
All Ages[3]	8424	76.5	1755	53.8	3399	68.4	391	55.5	427	67.2	37	56.1	14,433	69.9
20+	6540	77.6	1405	56.4	2323	69.0	288	56.3	320	70.0	30	62.5	10,906	71.3
< 20	1884	73.0	350	45.5	1075	67.2	103	53.6	107	60.1	7	38.9	3,526	66.0
18-19	1286	74.9	222	50.3	571	67.3	52	56.5	63	58.9	5	45.5	2,199	68.4
12-17	598	69.2	128	38.9	504	67.0	51	51.0	44	62.0	2	**	1,327	62.5

Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Non-Hispanic

** Calculations based on fewer than five events are excluded.

[1] Only includes births with in-hospital paternity acknowledgment (see Glossary for further explanation).

[2] Percentages are based on the total number of births to unmarried mothers within each category.

[3] "All Ages" includes mothers of unknown age.

- Among women of all ages, in-hospital paternity acknowledgment varied widely by race/Hispanic ethnicity, ranging from a high of 76.5% among white non-Hispanic unmarried mothers to a low of 53.8% among black non-Hispanic unmarried mothers. However, paternity acknowledgment increased from 1996 to 1997 within each race/Hispanic ethnicity groups (data not shown).

- The variation in paternity acknowledgment across race/Hispanic ethnicity groups was seen among births to both adult and teen unmarried women. For both age groups, white non-Hispanics had the highest percentages, while black non-Hispanics and Asians had the lowest.

- Among the youngest teens (ages 12-17), black non-Hispanic unmarried mothers had the lowest percentage of paternity acknowledgment, with only 38.9% of births being acknowledged by the father.

Table 12.
Father's Age by Unmarried Mother's Age for Births with Acknowledged Paternity[1]
Massachusetts: 1997

Unmarried Mother's Age	Father's Age												Total[3]	
	12-15		16-17		18-19		20-24		25-29		30 and Older			
	N	%[2]	N	%[2]	N	%[2]	N	%[2]	N	%[2]	N	%[2]	N	%[2]
20 +	0	0.0	44	0.4	326	3.0	2,777	25.5	3,349	30.7	4,355	39.9	10,906	100.0
< 20	40	1.1	424	12.0	1,036	29.4	1,556	44.1	321	9.1	128	3.6	3,526	100.0
< 18	33	2.5	287	21.6	455	34.3	444	33.5	73	5.5	22	1.7	1,327	100.0
18-19	7	0.3	137	6.2	581	26.4	1,112	50.6	248	11.3	106	4.8	2,199	100.0
16-17	14	1.2	207	18.5	405	36.1	396	35.3	69	6.2	21	1.9	1,121	100.0
12-15	19	9.2	80	38.8	50	24.3	48	23.3	4	**	1	**	206	100.0

Source: Registry of Vital Records and Statistics, MDPH, 1997.

** Calculations based on fewer than five events are excluded.

[1] Only includes births with in-hospital paternity acknowledgment (see Glossary for further explanation).

[2] Percentages are based on the total number of fathers whose ages were identified by unmarried mothers within each category.

[3] "Total" includes fathers with unknown ages

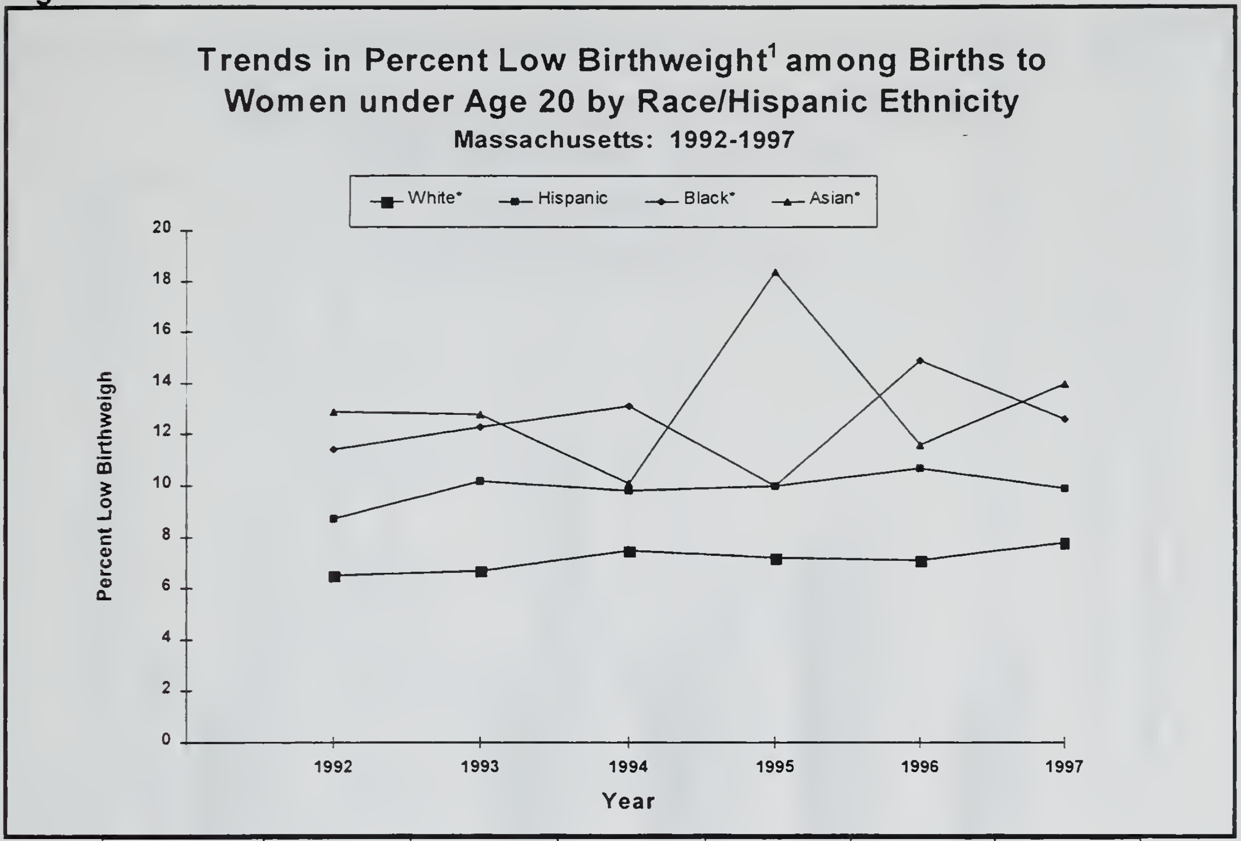
- Among unmarried women ages 20 and older, 96.1% of the named fathers were also 20 and older. Among unmarried teens (<20 years of age), 56.8% of the named fathers were 20 and older, a slight decrease from 57.1% in 1996 (data not shown).

- Among unmarried teen mothers ages 16-17, the percentage of named fathers who were 20 and older increased from 41.8% in 1996 to 43.4% in 1997. Among 12-15 year old unmarried mothers, 25.7% of named fathers were 20 and older, 9.8% higher than the percentage in 1996 (23.4%) (1996 data not shown).

II.

Birth Outcomes and Prenatal Care

Figure 6



Trends in Percent Low Birthweight[1] among Births to Women under Age 20 by Race/Hispanic Ethnicity
Massachusetts: 1992-1997

	1992	1993	1994	1995	1996	1997
White*	6.5	6.7	7.5	7.2	7.1	7.8
Black*	11.4	12.3	13.1	10.0	14.9	12.6
Hispanic	8.7	10.2	9.8	10.0	10.7	9.9
Asian*	12.9	12.8	10.1	18.4	11.6	14.0
Total <20	8.0	8.6	9.1	8.6	9.4	9.5

Source: Registry of Vital Records and Statistics, MDPH, 1992-1997.

* Non-Hispanic

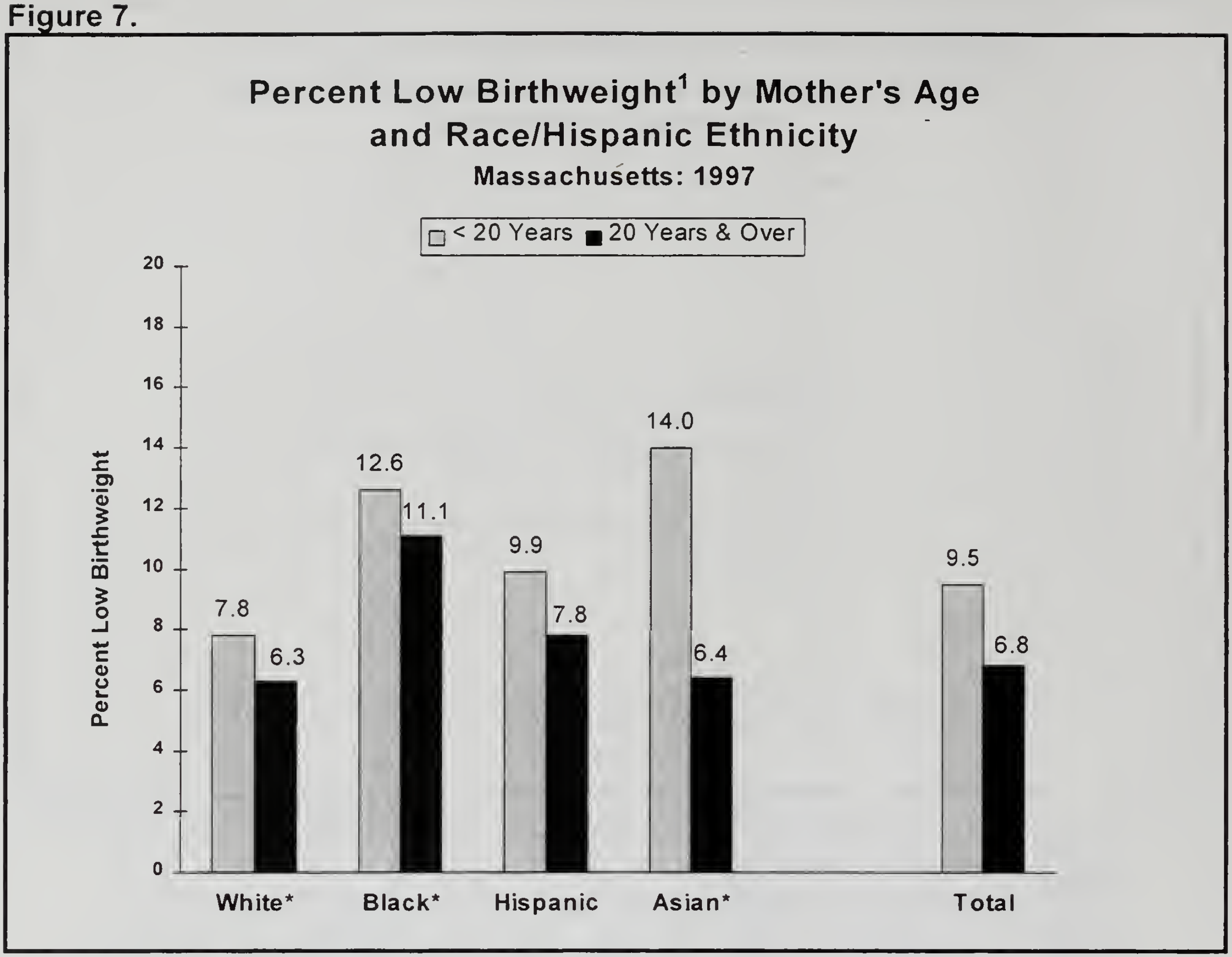
[1] Low birthweight: < 2,500 grams or 5.5 pounds.

- In 1997, the proportion of low birthweight births (less than 2,500 grams) among births to teens (ages 12-19) was 9.5%. The occurrence of low birthweight (LBW) among teens continued to differ across race/Hispanic ethnicity groups, with white non-Hispanic teens having the lowest percentages of LBW. This same pattern was seen among births to older women (ages 20 and older) (see Figure 7).

- In 1996, the widest gap between the percentages of LBW infants born to teens was between births to white non-Hispanic teen mothers (7.1%) and births to black non-Hispanic mothers (14.9%). This gap narrowed in 1997 due to an increase in LBW among white non-Hispanic teen births (to 7.8%) and a decrease among black non-Hispanic births (to 12.6%). Percentage LBW among Hispanic teen births decreased from 10.7% in 1996 to 9.9% in 1997.

- *Because the number of LBW births is small among Asian teen mothers, their LBW percentages fluctuate widely and changes over time should be interpreted with caution.* The percentage of LBW births to Asian teen mothers increased from 11.6% in 1996 to 14.0% in 1997, an increase attributable to a difference of 11 births.

Figure 7.



Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Non-Hispanic

[1] Low birthweight: < 2,500 grams or 5.5 pounds.

- Overall, the proportion of low birthweight births among teen births was 39.7% higher than it was for births to adult women (9.5% vs. 6.8%). This ratio varied by race/Hispanic ethnicity. Low birthweight among births to black non-Hispanic teens in 1997 was only 13.5% higher than among births to black non-Hispanic adults (12.6% vs. 11.1%). Low birthweight among white non-Hispanic teens was 23.8% higher than among white non-Hispanic adult women (7.8% vs. 6.3%), while Asian teens had more than twice as high a percentage of low birthweight compared with adult Asian women (14.0% vs. 6.4%).

Table 13.
Low Birthweight[1] Births by Mother's Age and Race/Hispanic Ethnicity Massachusetts: 1997

Mother's Age	White*		Black*		Hispanic		Asian*		Other		Unknown		Total	
	N[2]	%[3]	N[2]	%[3]	N[2]	%[3]	N[2]	%[3]	N[2]	%[3]	N[2]	%[3]	N[2]	%[3]
All Ages[4]	3,915	6.4	617	11.3	680	8.3	264	6.8	124	8.7	17	13.2	5,617	7.0
20 +	3,691	6.3	517	11.1	501	7.8	234	6.4	101	8.3	13	11.4	5,057	6.8
< 20	224	7.8	100	12.6	179	9.9	30	14.0	23	11.2	4	**	560	9.5
<18	73	8.2	47	14.2	104	13.1	15	14.2	9	11.8	0	0.0	248	11.3
18-19	151	7.7	53	11.5	75	7.4	15	13.9	14	10.9	4	**	312	8.5
15-17	67	7.7	44	14.1	96	12.9	14	14.6	8	11.0	0	0.0	229	10.9
<15	6	28.6	3	**	8	16.0	1	**	1	**	0	0.0	19	18.4

Source: Registry of Vital Records and Statistics, MDPH, 1997

* Non-Hispanic

** Calculations based on fewer than five events are excluded.

[1] Low birthweight: < 2,500 grams or 5.5 pounds.

[2] "N" is the total number of low birthweight births in each category.

[3] Percentages are based on the total number of births in each category for which birthweight is known.

[4] "All Ages" includes mothers of unknown age.

- The percentage of low birthweight births rose with decreasing maternal age, with the highest percentage overall occurring among the infants of women less than 15 years old (18.4%), and the lowest occurring among births to women ages 20 and older (6.8%).

- Low birthweight also varied by race/Hispanic ethnicity. The proportion of low birthweight births to Hispanic women was about 25% higher among both teen (<20 years of age) and older mothers (20 years and older) compared with LBW among white non-Hispanic women in each age group. The proportion of LBW births to black non-Hispanic teens was 61.5% higher than LBW among white non-Hispanic teens. Among women 20 years and older, the percentage of births to black non-Hispanics that were low birthweight was 76.2% greater than the percentage among whites that were low birthweight.

Table 14.
Percent Low Birthweight[1] Births by Mother's Age Massachusetts and United States: 1997

Mother's Age	MA %[2]	U. S. %[2]
All Ages	7.0	7.5
20+ Years	6.8	7.2
< 20 Years	9.5	9.6
15-19 Years	9.3	9.5
< 15 Years	18.4	13.4

Source: Massachusetts data from Registry of Vital Records and Statistics, MDPH, 1997. U.S. data from the National Center for Health Statistics (NCHS), 1997. Please note that NCHS 1997 data are *preliminary*.

[1] Low birthweight: < 2,500 grams or 5.5 pounds.

[2] Percentages are based on the total number of births in each category for which birthweight is known.

- In 1997, the percentage of low birthweight (LBW) among births to Massachusetts women of all ages was lower than the national rate (7.0 vs. 7.7).

- Broken out by age, however, the 1997 Massachusetts percentage LBW among births to teens (<20 years of age) was equivalent to the teen LBW percentage nationwide (9.5% vs. 9.6%, respectively). Low birthweight among births to the youngest teens (<15 years of age) was higher than that of the nation (18.4% vs. 13.4%, respectively).

Table 15.
Low Birthweight[1] among Teen Births by Level of Prenatal Care[2,3] and Mother's Race/Hispanic Ethnicity Massachusetts: 1997

Mother's Race/ Ethnicity	Level of Prenatal Care								
	Adequate			Intermediate			Late/None		
	Births	Low Birthweight		Births	Low Birthweight		Births	Low Birthweight	
	N[4]	N	%	N[4]	N	%	N[4]	N	%
< 20 Years	3,414	292	8.6	1,807	186	10.3	541	48	8.9
White*	1,787	131	7.3	803	69	8.6	210	14	6.7
Black*	429	47	11.0	243	32	13.2	93	10	10.8
Hispanic	1,019	96	9.4	579	62	10.7	179	12	6.7
Asian*	86	11	12.8	88	11	12.5	36	7	19.4
Other*	90	7	7.8	91	12	13.2	18	2	**
Unknown	3	0	0.0	3	0	0.0	5	3	**

Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Non-Hispanic

** Calculations based on 1-4 events are excluded.

[1] Low birthweight: < 2,500 grams or 5.5 pounds.

[2] Adequacy of Prenatal Care is determined by a calculation that combines trimester of prenatal care registration with the number of prenatal care visits and adjusts for gestational age. See Glossary for further explanation.

[3] Due to a change in 1996 in the collection of information on Adequacy of Prenatal Care, caution should be used when comparing these data over time. Refer to Foreword for an explanation of these changes.

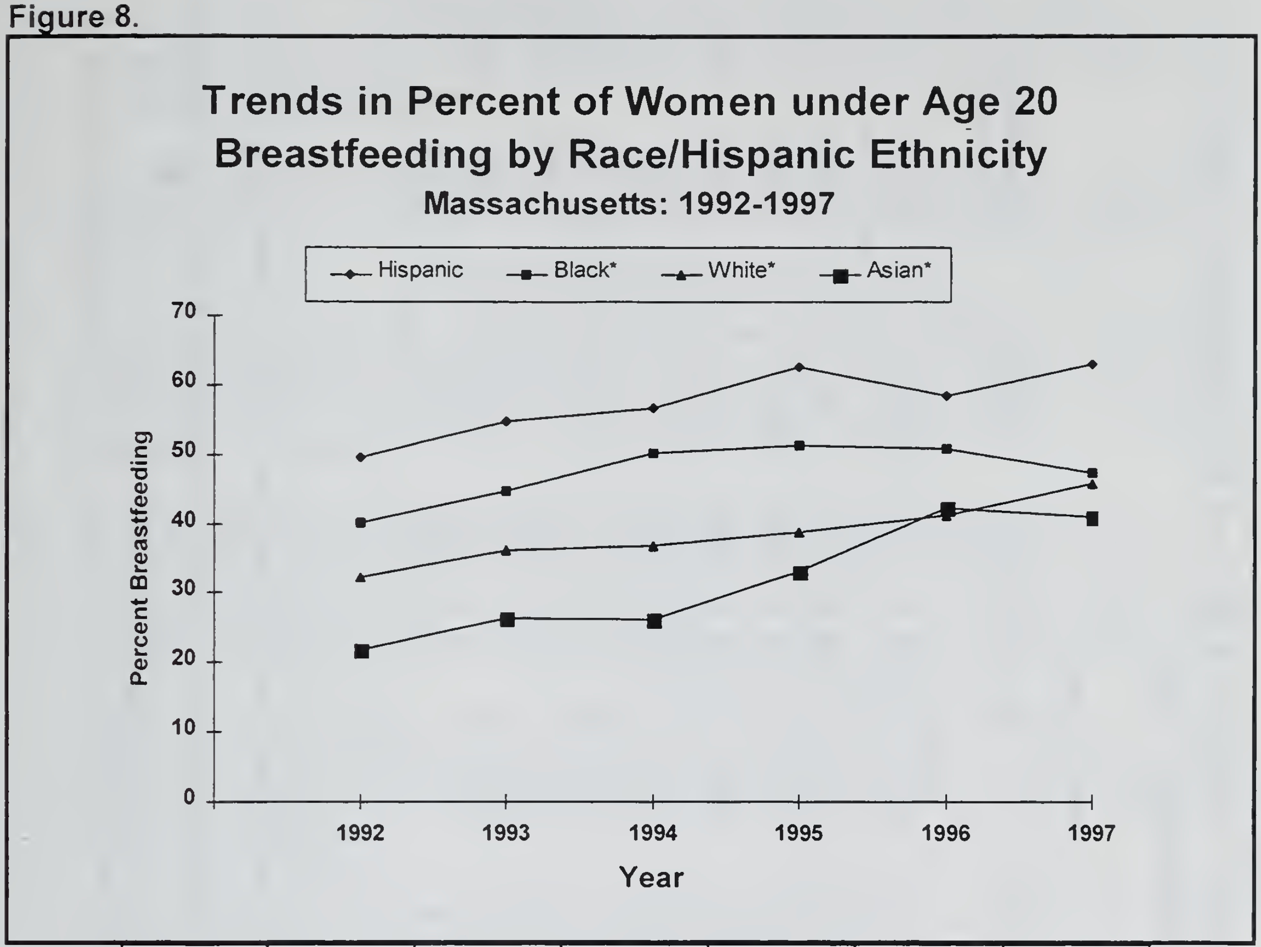
[4] Births with unknown birthweight and/or unknown adequacy of prenatal care were excluded.

- Teen mothers (< 20 years of age) who received an intermediate level of prenatal care had a higher percentage of low birthweight births (10.3%) compared with those who received an adequate level of care (8.6%) or late or no prenatal care (8.9%). This pattern was true across race/Hispanic ethnicity groups, with the exception of Asians whose highest percentage of LBW births was among mothers who received late or no prenatal care (19.4%).

- There was variation in the incidence of low birthweight among race/Hispanic ethnic groups, irrespective of the level of prenatal care. Black non-Hispanic teens with adequate prenatal care had a substantially higher percentage of low birthweight (11.0%) than white non-Hispanic teens with adequate prenatal care (7.3%). This discrepancy held true for the intermediate and late or no prenatal care categories as well.

- The percentage of LBW was high among Asian teens regardless of adequacy of care, however the numbers are small and should be should be interpreted with caution.

Figure 8.



	1992	1993	1994	1995	1996	1997
White*	32.2	36.3	36.8	38.8	41.3	45.8
Black*	40.2	44.6	50.1	51.3	50.8	47.4
Hispanic	49.6	54.8	56.6	62.5	58.4	63.1
Asian*	21.9	26.4	26.1	33.1	42.2	41.1
Total	38.0	42.5	44.7	47.5	48.0	51.4

Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Non-Hispanic

[1] Mother was breastfeeding or intending to breastfeed at the time the birth certificate was completed.

- The percentage of teen mothers who reported breastfeeding or an intention to breastfeed increased between 1996 and 1997 for white non-Hispanics (41.3% and 45.8%, respectively) and Hispanics (58.4% and 63.1%, respectively). Breastfeeding declined among black non-Hispanic teen mothers, from 50.8% in 1996 to 47.4% in 1997, and among Asians, from 42.2% to 41.1%, respectively.

- Hispanic teen mothers continued to have the highest percentage of breastfeeding or intention to breastfeed in 1997. Asian teen mothers consistently had the lowest percentages, with the exception of 1996, when the lowest reported percentage was among white non-Hispanic teen mothers (41.3%). Since 1992, the percentage of Asian teen mothers reporting breastfeeding or the intention to breastfeed has nearly doubled (from 21.9% to 41.9%).

Table 16.
Prenatal Care and Birth Characteristics By Mother's Age and Race/Hispanic Ethnicity
Massachusetts: 1997

Mother's Race/Ethnicity	Birthweight[1]				Prenatal Care				C-Section		Breastfeeding[4]	
	Very Low		Low		Adequate Care[2,3]		First Trimester					
	N	%[5]	N	%[5]	N	%[5]	N	%[5]	N	%[5]	N	%[5]
All Ages[6]	1,098	1.4	5,617	7.0	63,134	80.1	67,035	84.4	15,853	19.8	53,231	67.9
20 + Years	994	1.3	5,057	6.8	59,720	81.8	63,288	86.0	15,169	20.4	50,252	69.2
< 20 Years	104	1.8	560	9.5	3,414	59.2	3,747	64.6	684	11.6	2,979	51.4
White*	37	1.3	224	7.8	1,787	63.8	1,928	68.3	339	11.8	1,288	45.8
Black*	29	3.7	100	12.6	429	56.0	481	62.5	101	12.8	366	47.4
Hispanic	30	1.7	179	9.9	1,019	57.3	1,125	63.1	207	11.5	1,129	63.1
Asian*	2	**	30	14.0	86	41.0	97	46.0	12	5.6	88	41.1
Other*	4	**	23	11.2	90	45.2	111	55.2	22	10.7	107	53.2
Unknown	2	**	4	**	3	**	5	45.5	3	**	1	**

Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Non-Hispanic

** Calculations based on fewer than five events are excluded.

[1] Very low birthweight: < 1,500 grams or 3.3 pounds. Low birthweight: < 2,500 grams or 5.5 pounds.

[2] Adequacy of Prenatal Care is determined by a calculation that combines trimester of prenatal care registration with the number of prenatal care visits and adjusts for gestational age. See Glossary for further explanation.

[3] Due to changes, beginning in 1996, in the collection of information on Adequacy of Prenatal Care, caution should be used when comparing these data over time. Refer to Foreword for an explanation of these changes.

[4] Mother was breastfeeding or intending to breastfeed at the time the birth certificate was completed.

[5] Percentages are based on total number of births within each category when birthweight, prenatal care, cesarean section or breastfeeding information is known.

[6] "All Ages" includes mothers of unknown age.

- In 1997, very low birthweight was slightly more common among births to teens (<20 years) than among births to older women (1.8% vs.1.3%). Among teen births, very low birthweight was highest among births to black non-Hispanic mothers (3.7%) compared with other race/Hispanic ethnicity groups.

- As in previous years, teen mothers were less likely than non-teen mothers to have received adequate prenatal care (59.2% vs. 81.8%) or prenatal care starting in the first trimester (64.6% vs. 86.0%).

- A higher proportion of white non-Hispanic teens received adequate prenatal care (63.8%) compared with other race/Hispanic ethnicity groups. Asian teen mothers had the lowest percentage (41.0%). The same pattern was found among those teen mothers who started prenatal care in the first trimester (68.3% vs. 46.0%).

- The difference between the percentages of Asian and white non-Hispanic teen mothers receiving adequate prenatal care declined from 1996 to 1997. In 1996, the percentage of white non-Hispanic teen mothers receiving adequate prenatal care was 68.6% higher than the percentage among Asian mothers; and 55.6% higher in 1997 (1996 data not shown).

- A lower proportion of teen mothers delivered by cesarean section compared with non-teen mothers (11.6% vs. 20.4%). The percentage for teen mothers declined from the previous year (from 12.4% to 11.6%), while the percentage among older mothers was unchanged (1996 data not shown).

- Just over half (51.4%) of teen mothers reported breastfeeding or an intention to breastfeed, compared with over two-thirds (69.2%) of older mothers.

Table 17.
Births by Gestational Age, Mother's Age, and Mother's Race/Hispanic Ethnicity
Massachusetts: 1997

Mother's Age and Gestational Age[1] (weeks completed)	White*		Black*		Hispanic		Asian*		Other*		Unknown		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
20 Years and Older	58,277	100.0	4,663	100.0	6,403	100.0	3,662	100.0	1,222	100.0	187	100.0	74,414	100.0
< 37 weeks	3,955	6.8	513	11.0	530	8.3	203	5.5	103	8.4	13	7.0	5,317	7.1
37-42 weeks	53,799	92.3	4,093	87.8	5,820	90.9	3,426	93.6	1,102	90.2	78	41.7	68,318	91.8
43 + weeks	152	0.3	25	0.5	32	0.5	15	0.4	7	0.6	0	0.0	231	0.3
Unknown	371	0.6	32	0.7	21	0.3	18	0.5	10	0.8	96	51.3	548	0.7
Less than 20 Years	2,865	100.0	794	100.0	1,807	100.0	214	100.0	205	100.0	19	100.0	5,904	100.0
< 37 weeks	200	7.0	90	11.3	185	10.2	20	9.3	19	9.3	2	**	516	8.7
37-42 weeks	2,637	92.0	696	87.7	1,606	88.9	192	89.7	184	89.8	10	52.6	5,325	90.2
43 + weeks	7	0.2	6	0.8	10	0.6	0	0.0	0	0.0	0	0.0	23	0.4
Unknown	21	0.7	2	**	6	0.3	2	**	2	**	7	36.8	40	0.7

Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Non-Hispanic

** Calculations based on fewer than five events are excluded.

[1] Clinical estimate of the number of weeks of pregnancy completed as estimated by the attendant at birth or the postnatal physician. The definition of normal gestational age, which has been revised for 1997 report, is delivery between the completion of the 37th and the 42nd week of pregnancy (see Technical Notes).

[2] Percentages are based on column totals.

- The incidence of preterm birth (< 37 weeks gestation) continued to be higher among teen births than among births to older women (8.7% vs. 7.1%). The gap narrowed in 1997 compared to 1996, as a result of a larger decline in the percentage of preterm births to teens than to older mothers (1996 data not shown).

- Black non-Hispanic teen mothers had the highest percentage of preterm births among the race/Hispanic ethnicity groups (11.3%), followed by births to Hispanic teen mothers (10.2%). White non-Hispanic teen mothers had the lowest percentage of preterm delivery (7.0%). The same pattern was seen among births to older women.

Table 18.

Trends in Infant Mortality Rates[1] by Mother's Age and Race/Hispanic Ethnicity Massachusetts: 1991-1996[2]

Mother's Age	White*		Black*		Hispanic		Asian*		Other/Unk		Total	
	N[3]	Rate	N[3]	Rate	N[3]	Rate	N[3]	Rate	N[3]	Rate	N[3]	Rate
1991												
20+	342	5.3	7	13.6	48	7.2	17	5.5	8	8.6	492	6.1
<20	38	9.9	14	13.2	20	11.3	1	**	2	**	75	10.7
1992												
20+	343	5.4	89	15.9	41	6.1	18	5.8	16	16.0	507	6.3
<20	32	9.0	20	18.9	19	11.0	0	0.0	2	**	73	11.0
1993												
20+	318	5.1	68	12.6	47	7.3	10	3.2	11	11.1	454	5.8
<20	25	7.2	14	14.0	23	12.7	2	**	0	0.0	64	9.7
1994												
20+	293	4.8	73	13.9	37	5.7	14	4.4	15	15.2	432	5.6
<20	33	10.0	8	8.0	20	10.3	1	**	2	**	64	9.7
1995												
20+	228	3.8	55	11.0	48	7.6	15	4.6	13	12.7	359	4.8
<20	25	7.8	7	8.1	15	8.7	0	0.0	1	**	48	7.9
1996												
20+	239	4.1	55	11.8	31	5.1	10	2.9	14	9.8	349	4.7
<20	21	7.1	10	12.3	13	7.5	1	**	2	**	47	8.0

Source: Registry of Vital Records and Statistics, MDPH: 1991-1996.

* Non-Hispanic

** Calculations based on fewer than five events are excluded.

[1] Age and race-specific infant mortality rate: number of infant deaths per 1,000 live births in each age group (see Glossary for further explanation).

[2] 1996 is the last year data were available for this analysis. See Technical Notes for further explanation of age-specific infant mortality.

[3] "N" refers to the number of infants born in that year who died before their first birthday.

- As in previous years, the 1996 infant mortality rate (IMR) was higher among births to teens than among births to older women. The IMR for infants born in 1996 was 8.0 deaths per 1,000 live births to teen women and 4.7 per 1,000 live births to older women.

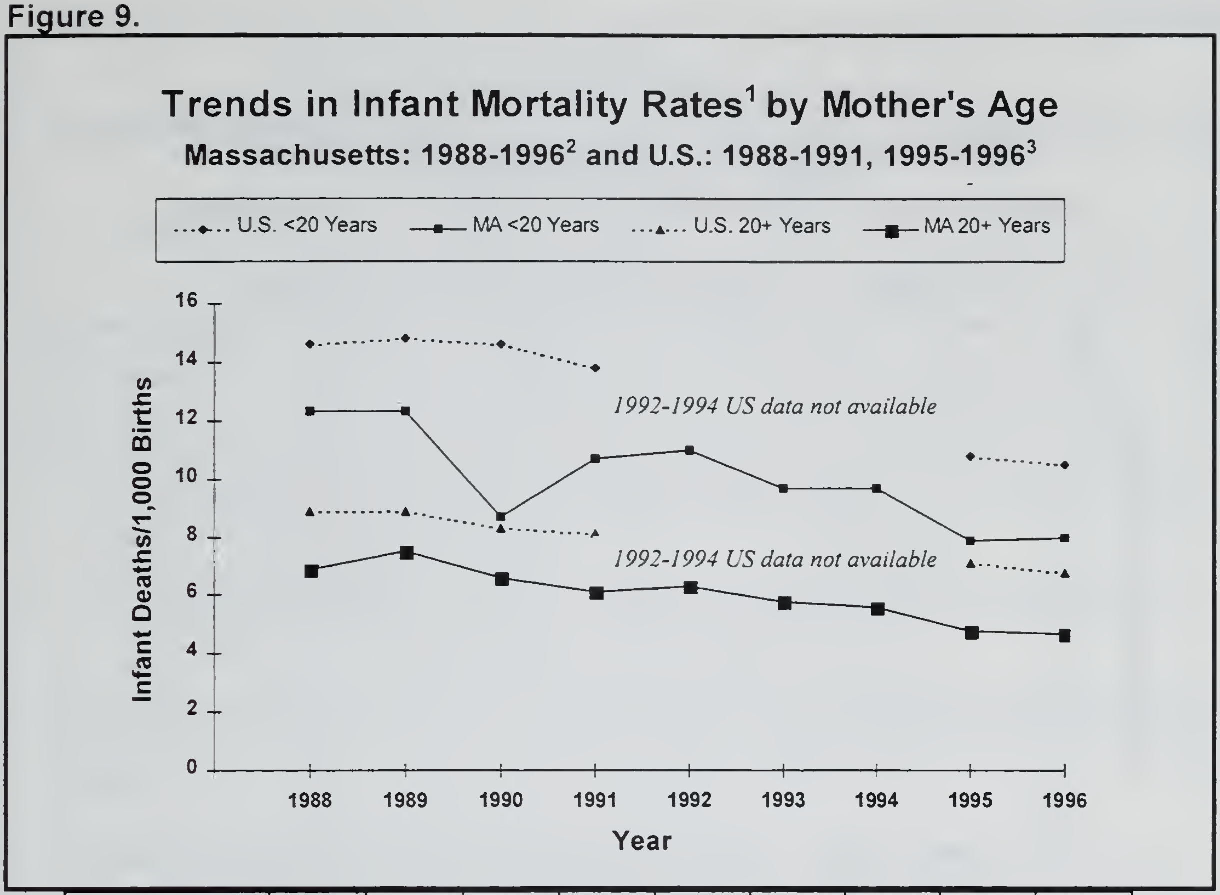
- In 1996, the IMR was higher among births to teens compared with births to older women across all race/Hispanic ethnicity groups except Asians. The number of Asian deaths (N=1) was so low that comparison is inappropriate in this group.

- While the IMR among births to white non-Hispanic and Hispanic teens has been consistently higher than the rate among non-teens, the same has not been true for black non-Hispanic teen mothers. Between 1991 and 1996, the IMR among births to black non-Hispanic women was lower for teen mothers in 1992, 1993 and 1996.

- Infant mortality rates overall have declined since 1991 for both teen births and births to older women. The decline from 1991-1996 in the infant mortality rate (IMR) among births to teens was slightly greater than the decline among births to older women (a 25.2% vs. 23.0% decline, respectively).

- While the IMR among infants born to teen mothers decreased from 1995 to 1996 among white non-Hispanics (from 7.8 to 7.1 deaths per 1,000 live births) and Hispanics (from 8.7 to 7.5 deaths per 1,000 live births), it increased among births to black non-Hispanic teens (from 8.1 to 12.3 deaths per 1,000 live births).

Figure 9.



Trends in Infant Mortality Rates[1] by Mother's Age

Massachusetts: 1988-1996[2] and U.S.: 1988-1991, 1995-1996[3]

	1988	1989	1990	1991	1992	1993	1994	1995	1996
U.S. <20 Years	14.6	14.8	14.6	13.8	N/A	N/A	N/A	10.8	10.5
MA <20 Years	12.3	12.3	8.7	10.7	11.0	9.7	9.7	7.9	8.0
U.S. 20+	8.9	8.9	8.3	8.1	N/A	N/A	N/A	7.1	6.8
MA 20+	6.9	7.5	6.6	6.1	6.3	5.8	5.6	4.8	4.7

Source: Registry of Vital Records and Statistics, MDPH, 1988-1996; National Center for Health Statistics, 1988-1991 and 1995-1996.

[1] Age-specific infant mortality rate: number of infant deaths per 1,000 live births to mothers in each age group (see Glossary for further explanation).

[2] 1996 is the latest year data were available for this analysis (see Technical Notes for further explanation).

[3] U.S. data not available for 1992-1994.

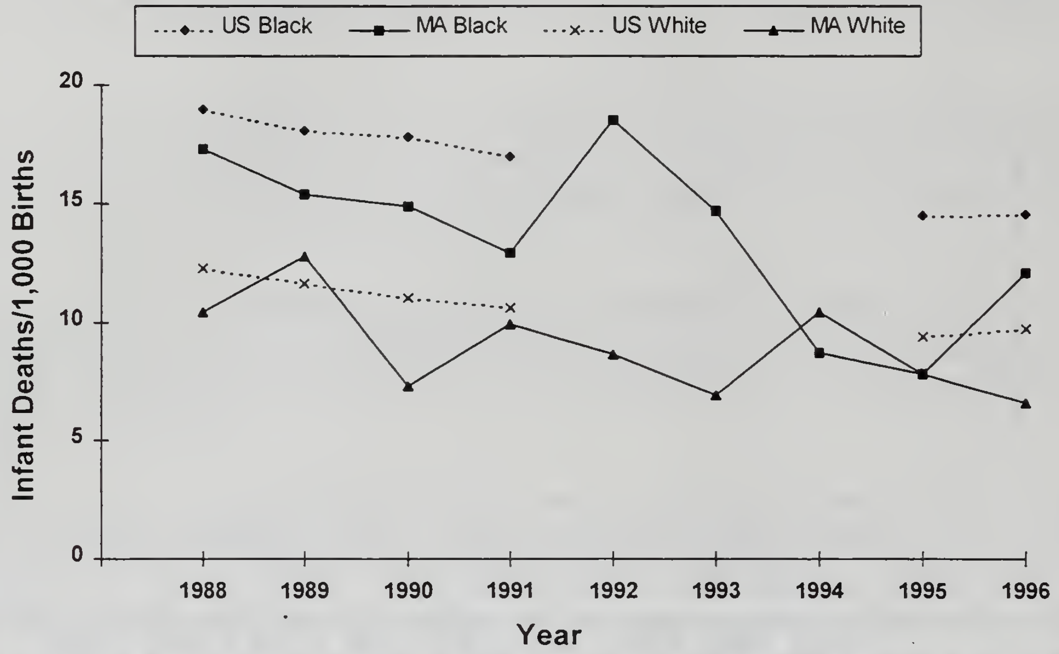
- The infant mortality rate (IMR) in Massachusetts has been consistently lower than the national IMR for both teen births and births to older women. The IMR among Massachusetts teen births in 1996 was 23.8% lower than the IMR among U.S. teen births (8.0 vs. 10.5 deaths per 1,000 live births). Similarly, the IMR among 1996 births to older women in Massachusetts was 30.9% lower than for the nation (4.7 vs. 6.8 per 1,000 live births).

- Between 1988 and 1996, the IMR in Massachusetts showed a greater decline compared with the nation for births to women of both age groups. During this period, the IMR among teen births declined 35.0% in Massachusetts compared with a decline of 28.1% for the U.S. The IMR for births to older women declined 31.9% in Massachusetts over the same period compared with 23.6% for the U.S. Between 1995 and 1996, however, the U.S. IMR for both age groups declined slightly, while the Massachusetts IMR for both age groups presented little change.

Figure 10.

Trends in Infant Mortality Rates[1] among Women under Age 20 by Race[2]

Massachusetts: 1988-1996[3] and US: 1988-1991, 1995-1996[4]



	1988	1989	1990	1991	1992	1993	1994	1995	1996
US Black	19.0	18.1	17.8	17.0	N/A	N/A	N/A	14.5	14.6
MA Black	17.3	15.4	14.9	12.9	18.5	14.7	8.7	7.8	12.1
US White	12.3	11.6	11.0	10.6	N/A	N/A	N/A	9.4	9.7
MA White	10.4	12.9	7.3	9.9	8.6	6.9	10.4	7.8	6.6

Source: Massachusetts data from Registry of Vital Records and Statistics, MDPH: 1988-1996. U.S. data from the National Center for Health Statistics, 1988-1991 and 1995-1996.

[1] Age and race-specific infant mortality rate: number of infant deaths per 1,000 live births to mothers in each age group (see Glossary for further explanation).

[2] The white and black race categories include Hispanics.

[3] 1996 is the latest year data were available for this analysis. See Technical Notes for further explanation.

[4] U.S. data not available for 1992-1994.

- For the four year period 1988-1991, infant mortality among teen mothers at the national level exceeded that of Massachusetts teen mothers for both blacks and whites (with an exception in 1989, when infant mortality among whites in Massachusetts exceeded that of the U.S.).

- The gap between the national and Massachusetts IMRs among black teen births narrowed from 1995 to 1996 due to the increase in black infant deaths in the state in 1996. In 1995, the national IMR among births to black teens was 85.9% higher; in 1996, it was 20.7% higher. Conversely, the gap between the national and Massachusetts IMRs among births to white teens widened: the national rate was 20.5% higher in 1995 and 47.0% higher in 1996.

Table 19.
Infant Mortality Rates[1] by Low Birthweight[2] and Mother's Age Massachusetts: 1996[3]

	<1500g		1500-2499g		<2500g		2500+g	
Mother's Age	**N[4]**	**IMR**	**N[4]**	**IMR**	**N[4]**	**IMR**	**N[4]**	**IMR**
20 + Years	179	215.1	41	11.0	220	48.3	108	1.6
< 20 Years	25	257.7	5	11.1	30	54.8	16	3.1

Source: Registry of Vital Records and Statistics, MDPH: 1996.

[1] Age and birthweight-specific infant mortality rate: number of infant deaths per 1,000 live births in each age group (see Glossary for further explanation).

[2] Low birthweight: < 2,500 grams or 5.5 pounds.

[3] 1996 is the latest year data were available for this analysis. See Technical Notes for further explanation.

[4] "N" refers to the number of deaths occurring in that age and birthweight category.

- The infant mortality rate (IMR) among normal birthweight infants (2,500 grams or more) was nearly twice as high for births to teen mothers as for births to adult mothers (3.1 vs. 1.6 per 1,000).

- The IMR increased dramatically as birthweight declined, regardless of mother's age. In 1996, the IMR among very low birthweight births (< 1,500 grams) to teen mothers was 23 times greater than the rate among moderately low birthweight births (1,500-2,499 grams) (257.7 vs. 11.1). The IMR among very low birthweight births to adult mothers was 20 times greater than the rate among moderately low birthweight births (215.1 vs. 11.0).

- The IMRs among births to teens exceeded the rates for adults in each birthweight category except for moderately low birthweight, where the rates were comparable (11.1 and 11.0, respectively). Compared with 1995, the difference between the IMRs of teen and adult very low birthweight births narrowed in 1996. In 1995, IMR among very low birthweight teen births was 33.7% higher than very low birthweight adult births (279.1 vs. 208.7), compared to 19.8% higher in 1996 (257.7 vs. 215.1).

- Between 1995 and 1996, infant mortality among low birthweight births (<2500 grams) decreased for both teens and adults. A larger decrease in IMR was found among births to teens (6.8%) than to adults (1.6%) (1995 data not shown).

Table 20.
Trends in Neonatal and Post Neonatal Mortality Rates[1] by Mother's Age
Massachusetts: 1991-1996[1]

Mother's Age	Neonatal[2] Mortality		Post Neonatal[3] Mortality		Total Infant[4] Mortality	
	N[5]	Rate	N[5]	Rate	N[5]	Rate
1991						
20+	350	4.3	142	1.8	492	6.1
<20	51	7.3	24	3.4	75	10.7
1992						
20+	372	4.6	130	1.6	502	6.2
<20	52	7.8	21	3.2	73	11.0
1993						
20+	331	4.2	123	1.6	454	5.8
<20	44	6.7	20	3.0	64	9.7
1994						
20+	309	4.0	122	1.6	431	5.6
<20	47	7.2	17	2.6	64	9.7
1995						
20+	263	3.5	96	1.3	359	4.8
<20	29	4.7	19	3.1	48	7.9
1996						
20+	252	3.4	95	1.3	347	4.7
<20	28	4.8	19	3.2	47	8.0

Source: Registry of Vital Records and Statistics, MDPH: 1991-1996.

[1] 1996 is the latest year data were available for this analysis. See Technical Notes for further explanation.

[2] Neonatal: less than 28 days (see Glossary)

[3] Post neonatal: 28-364 days (see Glossary)

[4] Age-specific infant mortality rate: number of infant deaths per 1,000 live births in each age group (see Glossary for further explanation).

[5] "N" refers to the number of deaths occurring in that year.

- In 1996, the post-neonatal mortality rate among births to teen mothers was over two times that of adult mothers (3.2 vs. 1.3). Neonatal mortality was also higher among births to teen mothers (4.8 vs. 3.4). Since 1991, neonatal and post neonatal mortality occurred at consistently higher rates among births to teens compared with adults.

- Regardless of mother's age, the IMR was consistently higher during the neonatal period than in the post neonatal period.

- After a 34.7% drop between 1994 and 1995, the 1996 neonatal mortality among births to teen mothers remained relatively unchanged from 1995 (4.7 in 1995 vs. 4.8 in 1996). A similar pattern was found among adult mothers.

Table 21.
Maternal Smoking[1,2] by Mother's Age and Race/Hispanic Ethnicity Massachusetts: 1997

Mother's Race/Ethnicity	< 20 Years			20+ Years		
	Births N[3]	Smokers N	Smokers %	Births N[3]	Smokers N	Smokers %
Total	5,875	1,255	21.4	74,115	8,561	11.6
White*	2,860	920	32.2	58,168	7,280	12.5
Black*	792	88	11.1	4,653	525	11.3
Hispanic	1,803	181	10.0	6,389	577	9.0
Asian*	214	24	11.2	3,658	59	1.6
Other*	204	42	20.6	1,220	117	9.6
Unknown	2	0	0.0	27	3	**

Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Non-Hispanic

** Calculations based on 1-4 events are excluded.

[1] Any amount of cigarette smoking by mother during pregnancy.

[2] Maternal smoking is self-reported by mothers, usually following the birth of their child, and as such these data should be interpreted cautiously. Self-reported data may be biased, artificially lowering smoking prevalence.

[3] Cases with unknown smoking status were excluded.

- As in 1996, more teen mothers reported smoking during pregnancy in 1997 than adult mothers (21.4% vs. 11.6%). Between 1996 and 1997, the percentage of teen mothers who smoked during pregnancy decreased from 23.1% to 21.4%. The percentage of adult women who smoked also decreased slightly from 12.4% to 11.6% (1996 data not shown).

- Among teen mothers, white non-Hispanics had the highest prevalence of smoking (32.2%), nearly 3 times that of the next highest race/Hispanic ethnicity, Asian (11.2%). Hispanic teen mothers had the lowest prevalence of smoking (10.0%). White non-Hispanic teen mothers were also 2.6 times more likely to smoke during pregnancy than were adult mothers of the same race.

- Between 1996 and 1997, smoking prevalence during pregnancy decreased among the following teen race/Hispanic ethnicity groups: white non-Hispanic, from 34.0% to 32.2%; black non-Hispanic, from 13.0% to 11.1%; Hispanic, from 10.8% to 10.0%. Among Asian teen mothers, the smoking prevalence during pregnancy increased from 9.8% to 11.2% (1996 data not shown).

Table 22.
Low Birthweight by Mother's Age, Smoking[1,2] Status and Race/Hispanic Ethnicity
Massachusetts: 1997

	Smokers			Non-Smokers		
	Births	LBW		Births	LBW	
Mother's Age	N[3]	N	%[4]	N[3]	N	%[4]
20 Years and Older	8,557	892	10.4	65,510	4,124	6.3
White*	7,277	728	10.0	50,856	2,937	5.8
Black*	525	78	14.9	4,123	438	10.6
Hispanic	577	74	12.8	5,810	425	7.3
Asian*	59	3	**	3,596	230	6.4
Other/Unknown*	119	9	7.6	1,125	94	8.4
< 20 Years	1,253	145	11.6	4,615	408	8.8
White*	918	96	10.5	1,940	127	6.5
Black*	88	13	14.8	702	86	12.3
Hispanic	181	25	13.8	1,619	153	9.5
Asian*	24	5	20.8	190	25	13.2
Other/Unknown*	42	6	14.3	164	17	10.4

Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Non-Hispanic

** Calculations based on fewer than five events are excluded.

[1] Any amount of smoking cigarettes by mother during pregnancy.

[2] Maternal smoking is self-reported by mothers, usually following the birth of their child, and as such these data should be interpreted cautiously. Self-reported data may be biased, artificially lowering smoking prevalence.

[3] Cases with unknown smoking status or birthweight were excluded.

[4] Percentage of low birthweight births (<2,500 grams) to smoking or non-smoking mothers.

- Low birthweight births occurred more frequently among mothers who smoked during pregnancy than among non-smoking mothers, for both teen and adult mothers, and across all race/Hispanic ethnicity groups (except among Asians where there were too few smokers to make the comparison meaningful).

- The percentage of low birthweight births to smokers increased from 1996 to 1997 for teen mothers (10.9% to 11.6%) and showed little change for adult mothers (10.6% to 10.4%) (1996 data not shown). There was variation in the change from 1996 to 1997 by race/Hispanic ethnicity. White non-Hispanic smokers showed an increase in low birthweight births (teens: 9.0% to 10.5%, adults: 9.6% to 10.0%). Hispanic smokers showed a decrease in low birthweight births among teens (14.7% to 13.8%) and adults (13.7% to 12.8%). The greatest decreases were found among black non-Hispanic smokers, both teens (24.0% to 14.8%) and adults (20.7% to 14.9%).

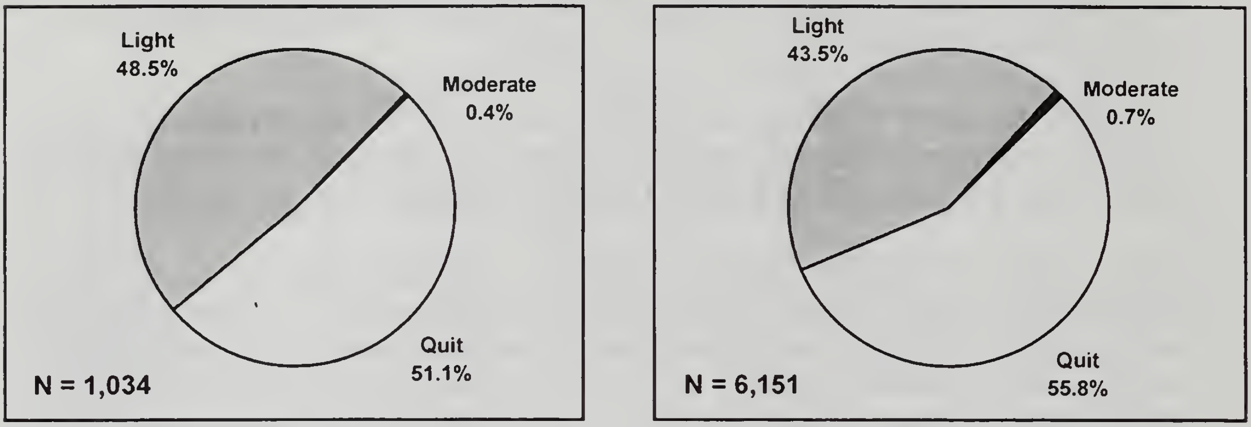
- In 1997, the percentage of low birthweight births among black non-Hispanic teen smokers was 1.4 times greater than among white non-Hispanic smoking teens. The percentage of low birthweight births among non-smoking black non-Hispanic teens was 1.9 times greater than non-smoking white teens.

- The percentage of low birthweight births among adult smokers was 65% higher (10.4% vs. 6.3%) than among adult non-smokers. Among teens, the percentage of low birthweight births was 32% higher (11.6% vs. 8.8%) for smokers compared with non-smokers.

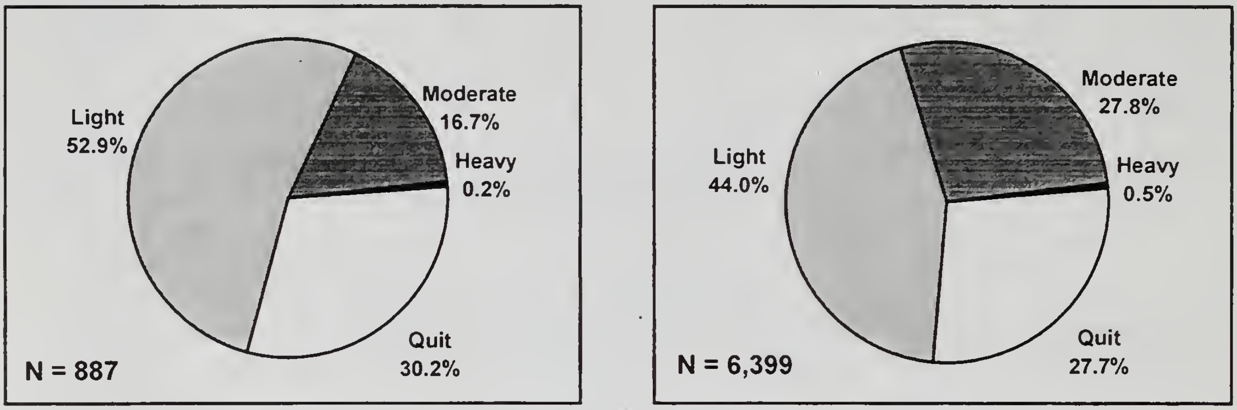
- Compared with non-smokers, low birthweight among smokers varied little between the two age groups, particularly for non-Hispanic white and black smokers. The percentage of low birthweight births to black non-Hispanic teen smokers was virtually the same as to adult smokers of the same race (14.8% vs. 14.9%). This is a change from 1996 when births to black teen smokers had a higher prevalence of low birthweight (1996 data not shown).

Figure 11.
Smoking Level[1] During Pregnancy by Mother's Age and Smoking Level Prior to Pregnancy
Massachusetts: 1997

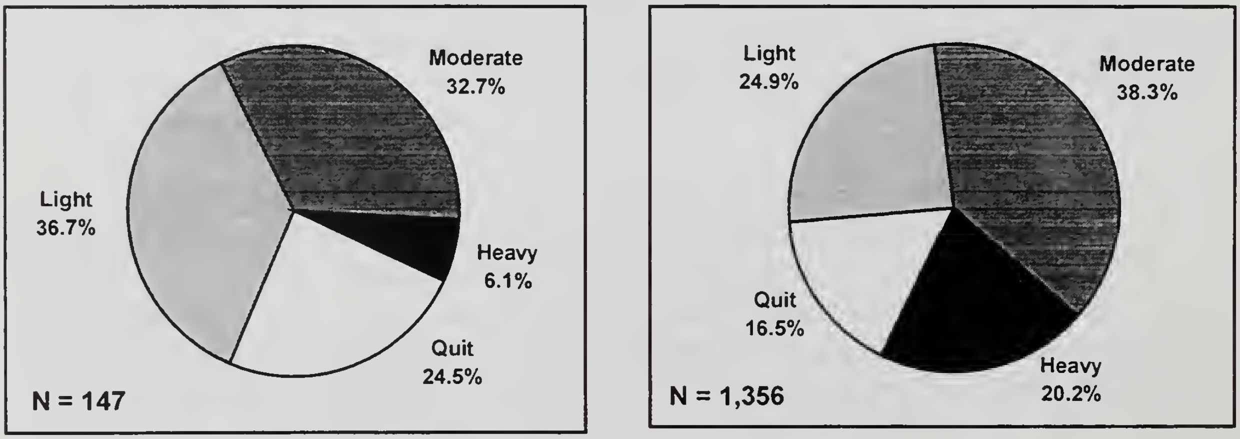
Smoking Status During Pregnancy among Light Smokers Prior to Pregnancy


Mother's Age: **<20 years**   Mother's Age: **20+ years**

Smoking Status During Pregnancy among Moderate Smokers Prior to Pregnancy


Mother's Age: **<20 years**   Mother's Age: **20+ years**

Smoking Status During Pregnancy among Heavy Smokers Prior to Pregnancy


Mother's Age: **<20 years**   Mother's Age: **20+ years**

Source: Registry of Vital Records and Statistics, MDPH, 1997.

[1] Daily use: Light = 1-10 cigarettes, Moderate = 11-20 cigarettes, Heavy = 21+ cigarettes

- Overall, the fewer cigarettes mothers smoked *prior* to pregnancy, the more likely they were to quit or reduce their level of smoking *during* pregnancy. This pattern was found among both teen and non-teen age groups.

- Among teen mothers who were light smokers prior to pregnancy (smoked 1-10 cigarettes per day), just over half (51.1%) quit smoking during pregnancy, 48.5% maintained light smoking and less than 1% increased their smoking to moderate levels. This pattern also occurred among non-teen mothers.

- In 1997, 83.1% of teen mothers who were moderate smokers prior to pregnancy either quit or reduced their consumption, compared with 71.7% of non-teen mothers in the same category. Among teen moderate smokers, 52.9% reduced their smoking status to light and 30.2% quit, while 44.0% of older moderate smokers reduced to light smoking and 27.7% quit.

- Older mothers (ages 20 and older) who were heavy smokers prior to pregnancy (smoked 21 or more cigarettes per day) were far less likely to quit or reduce their smoking levels compared with heavy smoking teen mothers. Among the heavy smoking mothers, 61.2% of teens either quit or reduced their smoking levels to light compared with 41.4% of older mothers. Similarly, 20.2% of older, heavy smoking mothers remained heavy smokers during pregnancy, as opposed to only 6.1% of teen, heavy smoking mothers.

Table 23.
Expected Educational Attainment among Teen Mothers by Race/Hispanic Ethnicity
Massachusetts: 1997

Community	Behind Grade Level[1]	
	Number	Percent
Total	1,744	29.7
White*	760	26.6
Black*	141	17.8
Hispanic	721	40.0
Asian*	63	29.4
Other	59	28.9
Unknown	0	0.0

Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Non-Hispanic

[1] "Behind Grade Level" is defined as two or more grades behind the maximum expected age for a grade at the time of delivery. See Technical Notes and Glossary for further explanation.

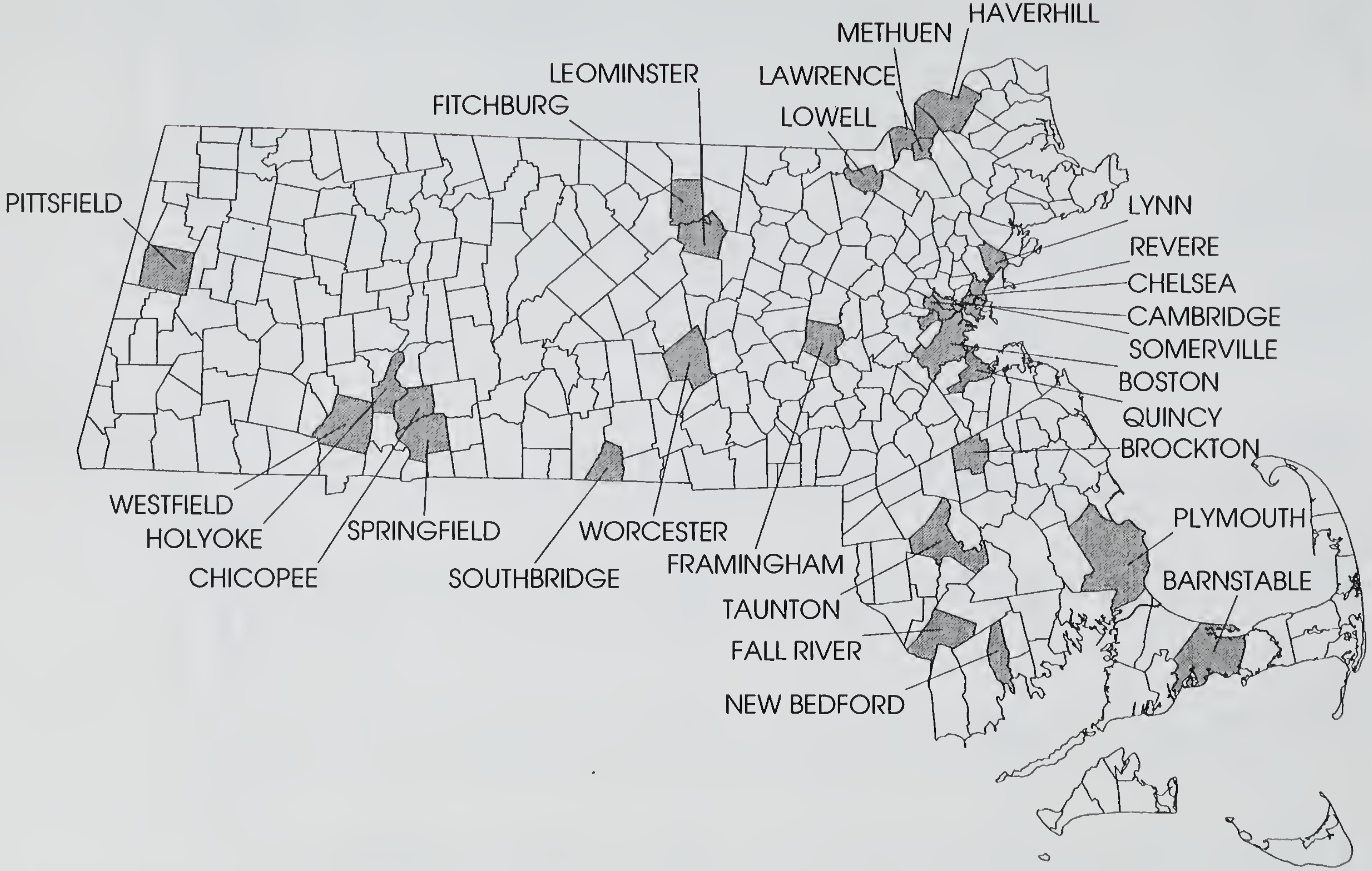
- In 1997, 29.7% of births to teens (< 20 years of age) were to women who were behind their expected grade level at school.

- The proportions of teens who were behind their expected grade level at school varied by race/Hispanic ethnicity. A greater proportion of Hispanic teen mothers were behind their expected grade level (40.0%) compared to Asians (29.4%), white non-Hispanics (26.6%), and black non-Hispanics (17.8%).

III.

Birth Characteristics for Selected Communities

Figure 12.
27 Communities with the Highest Number of Teen Births, 1997



Source: Registry of Vital Records and Statistics, MDPH
Map Produced by Office of Statistics and Evaluation, BFCH, MDPH
March 1999

Table 24.
Trends in Birth Rates Among Women Ages 15-19 for Selected Communities[1], Ranked by 1997 Teen Birth Rate[2] Massachusetts: 1997, 1996, 1990

1997 Rank	Demographic Area	1997		1996		1990	
		Number Births 15-19	Teen Birth Rate	Number Births 15-19	Teen Birth Rate	Number Births 15-19	Teen Birth Rate
	Massachusetts	**5,801**	**33.8**	**5,758**	**32.6**	**7,258**	**35.1**
1	Holyoke	180	94.9	188	102.6	203	140.3
2	Chelsea	92	93.9	91	93.8	105	114.8
3	Revere	46	93.2	38	66.0	45	42.3
4	Southbridge	48	91.7	38	71.4	48	82.5
5	Springfield	476	82.3	479	82.5	523	87.9
6	Lawrence	277	81.1	278	83.7	338	122.8
7	Lowell	276	76.2	233	63.9	309	81.3
8	Lynn	182	73.8	155	62.9	194	79.4
9	Brockton	196	71.7	208	74.4	216	67.8
10	Pittsfield	58	68.0	56	58.9	74	48.3
11	New Bedford	221	66.4	216	64.6	263	76.3
12	Methuen	47	62.3	42	50.7	53	41.7
13	Haverhill	87	61.1	69	47.8	94	60.4
14	Fitchburg	88	55.1	100	61.7	146	82.1
15	Fall River	141	53.5	152	55.9	246	76.9
16	Worcester	313	52.4	304	49.9	399	58.8
17	Taunton	70	51.0	98	70.1	95	61.0
18	Boston	825	47.4	794	44.1	1,137	52.7
19	Leominster	43	41.3	72	68.5	42	37.8
20	Barnstable	38	39.7	27	27.7	37	34.3
21	Framingham	61	37.6	45	26.3	44	19.6
22	Chicopee	63	37.4	64	37.4	84	44.9
23	Somerville	58	33.1	71	39.1	64	29.2
24	Quincy	38	28.9	38	26.1	51	22.0
25	Westfield	40	27.0	29	19.2	50	29.4
26	Plymouth	38	26.2	39	26.6	55	35.6
27	Cambridge	54	17.6	46	14.6	54	14.9

Sources: Registry of Vital Records and Statistics, MDPH, 1996, 1997. The 1990 population data are based on the 1990 Census Massachusetts Age, Race and Sex File (MARS File); the 1996 and 1997 data are interpolations based on the 1990 Census and estimates from the Massachusetts Institute for Social and Economic Research (MISER).

[1] 25 communities with the greatest number of births to teens ages 12-19. In 1997, there were 27 communities due to ties in the numbers of teen births.

[2] Rates are per 1,000 females ages 15-19 in each city/town.

Table 25.
Births by Mother's Age and Race/Hispanic Ethnicity for Selected Communities[1]
Massachusetts: 1997

Community	Births	White*	Black*	Hispanic	Asian*	Other/ Unknown	Total
Massachusetts	**All Ages[2]**	**61,143**	**5,457**	**8,211**	**3,876**	**1,634**	**80,321**
	< 18	893	330	796	106	83	2,208
	< 20	2,865	794	1,807	214	224	5,904
	20 +	58,277	4,663	6,403	3,662	1,409	74,414
Barnstable	All Ages[2]	423	17	14	5	25	484
	< 18	8	**	0	0	**	9
	< 20	29	**	**	0	2	38
	20 +	394	¥	¥	5	23	446
Boston	All Ages[2]	2,634	2,506	1,662	640	380	7,822
	< 18	25	170	126	13	16	350
	< 20	89	385	282	38	46	840
	20 +	2,545	2,121	1,380	602	334	6,982
Brockton	All Ages[2]	701	333	156	43	196	1,429
	< 18	22	26	21	0	13	82
	< 20	79	53	40	**	¥	204
	20 +	622	280	116	¥	¥	1,225
Cambridge	All Ages[2]	595	168	82	135	35	1,015
	< 18	**	8	6	**	1	20
	< 20	12	24	15	**	**	55
	20 +	583	144	67	¥	¥	960
Chelsea	All Ages[2]	128	53	383	28	27	619
	< 18	6	**	23	**	3	34
	< 20	13	6	65	**	¥	93
	20 +	115	47	318	¥	¥	526
Chicopee	All Ages[2]	441	17	84	7	3	552
	< 18	9	**	6	0	**	19
	< 20	36	5	21	**	**	64
	20 +	405	12	63	¥	**	488
Fall River	All Ages[2]	1,009	28	33	34	5	1,109
	< 18	37	**	**	**	2	46
	< 20	119	5	11	**	**	141
	20 +	890	23	22	¥	**	968

Table 25. (Continued)
Births by Mother's Age and Race/Hispanic Ethnicity for Selected Communities[1]
Massachusetts: 1997

Community	Births	White*	Black*	Hispanic	Asian*	Other/ Unknown	Total
Fitchburg	All Ages[2]	333	27	107	38	8	513
	< 18	14	**	13	**	0	32
	< 20	44	**	36	5	**	89
	20 +	289	¥	71	33	¥	424
Framingham	All Ages[2]	629	43	147	68	66	953
	< 18	11	**	8	0	**	22
	< 20	28	**	27	0	¥	62
	20 +	601	¥	120	68	¥	891
Haverhill	All Ages[2]	745	11	87	9	6	858
	< 18	25	0	6	0	0	31
	< 20	57	**	26	**	2	88
	20 +	688	¥	61	¥	4	770
Holyoke	All Ages[2]	252	23	422	6	5	708
	< 18	5	**	65	0	**	72
	< 20	25	6	152	**	**	184
	20 +	227	17	270	¥	¥	524
Lawrence	All Ages[2]	321	24	909	37	22	1,313
	< 18	15	**	113	**	0	131
	< 20	40	5	237	**	**	289
	20 +	281	19	672	¥	¥	1,024
Leominster	All Ages[2]	437	20	77	30	10	574
	< 18	7	**	6	0	**	14
	< 20	22	**	18	**	1	45
	20 +	415	¥	59	¥	9	529
Lowell	All Ages[2]	881	61	331	401	17	1,691
	< 18	34	**	42	50	**	128
	< 20	95	6	97	79	4	281
	20 +	786	55	234	322	13	1,410
Lynn	All Ages[2]	651	173	384	108	40	1,356
	< 18	21	6	31	7	4	69
	< 20	62	23	74	17	10	186
	20 +	589	150	310	91	30	1,170

Table 25. (Continued)
Births by Mother's Age and Race/Hispanic Ethnicity for Selected Communities[1]
Massachusetts: 1997

Community	Births	White*	Black*	Hispanic	Asian*	Other/ Unknown	Total
Methuen	All Ages[2]	435	6	89	16	9	555
	< 18	13	0	10	0	0	23
	< 20	26	**	18	0	**	47
	20 +	409	¥	71	16	¥	508
New Bedford	All Ages[2]	882	101	156	15	75	1,229
	< 18	46	12	20	**	¥	88
	< 20	135	28	41	**	¥	224
	20 +	747	73	115	¥	¥	1,005
Pittsfield	All Ages[2]	476	33	14	8	4	535
	< 18	15	**	**	0	3	23
	< 20	41	9	5	**	**	59
	20 +	435	24	9	¥	**	476
Plymouth	All Ages[2]	641	7	9	7	13	677
	< 18	11	0	**	0	**	13
	< 20	33	**	**	0	3	38
	20 +	608	¥	¥	7	10	639
Quincy	All Ages[2]	805	29	30	189	24	1,077
	< 18	9	0	**	0	**	10
	< 20	31	**	**	**	**	38
	20 +	774	¥	¥	¥	¥	1,039
Revere	All Ages[2]	412	38	71	48	20	589
	< 18	7	0	7	**	**	21
	< 20	23	**	14	5	¥	48
	20 +	389	¥	57	43	¥	541
Somerville	All Ages[2]	557	108	152	74	34	925
	< 18	13	**	10	0	**	25
	< 20	29	6	19	**	**	58
	20 +	528	102	133	¥	¥	867
Southbridge	All Ages[2]	153	[illegible]	78	8	2	243
	< 18	**	0	8	0	**	11
	< 20	17	**	30	0	**	48
	20 +	136	**	48	8	**	195

Table 25. (Continued)
Births by Mother's Age and Race/Hispanic Ethnicity for Selected Communities[1] Massachusetts: 1997

Community	Births	White*	Black*	Hispanic	Asian*	Other/ Unknown	Total
Springfield	All Ages[2]	839	533	846	79	30	2,327
	< 18	27	45	136	**	**	215
	< 20	97	116	268	7	6	494
	20 +	742	417	578	72	24	1,833
Taunton	All Ages[2]	704	18	34	6	9	771
	< 18	10	**	8	0	**	20
	< 20	52	**	14	0	**	70
	20 +	652	¥	20	6	¥	701
Westfield	All Ages[2]	387	6	30	8	1	432
	< 18	13	**	**	0	0	18
	< 20	34	**	**	0	0	41
	20 +	353	**	¥	8	1	391
Worcester	All Ages[2]	1,387	195	560	151	37	2,330
	< 18	30	15	67	6	4	122
	< 20	112	33	152	14	9	320
	20 +	1,275	162	408	137	28	2,010

Source: Registry of Vital Records and Statistics, MDPH, 1997.

* Non-Hispanic

** Information in cells with values 1-4 (excluding the "Other/Unknown" cells) is suppressed when births are cross-classified by age group and race/ethnicity in order to preserve the confidentiality of these cases. In these cases, additional cells with values less than 5 which enable calculation of the number of cases are also suppressed.

¥ These cells have numbers that are 5 and greater, but the numbers were suppressed to prevent inference of the value of the suppressed cell containing 1-4 cases.

[1] 25 communities with the greatest number of births to teens ages 12-19. In 1997, there were 27 communities due to ties in the numbers of teen births

[2] Includes births of unknown maternal age.

Table 26.
Birth Characteristics among Teen Births for Selected Communities[1]
Massachusetts: 1997

Community	Low Birthweight <2500 g	Adequacy of Care[2]			Multiparous[3]	
		Adequate	Intermediate	Inadeq/ None		
	Percent[4]	Percent[4]	Percent[4]	Percent[4]	Number	Percent[4]
Massachusetts	9.5	59.2	31.4	9.4	1,062	18.0
Barnstable	2.6	50.0	39.5	10.5	8	21.1
Boston	11.2	63.3	27.8	8.9	150	17.9
Brockton	11.3	55.1	32.3	12.6	33	16.2
Cambridge	10.9	60.0	32.7	7.3	4	**
Chelsea	10.8	62.6	25.3	12.1	23	24.7
Chicopee	6.3	54.7	28.1	17.2	6	9.4
Fall River	9.9	54.0	35.8	10.2	25	17.7
Fitchburg	12.4	59.6	27.0	13.5	25	28.1
Framingham	9.7	72.1	21.3	6.6	11	17.7
Haverhill	6.9	64.4	27.6	8.0	17	19.3
Holyoke	9.8	63.7	25.8	10.4	57	31.0
Lawrence	10.8	50.4	37.2	12.4	70	24.2
Leominster	8.9	44.4	44.4	11.1	17	37.8
Lowell	11.7	50.7	38.6	10.7	80	28.5
Lynn	10.8	65.8	26.6	7.6	33	17.7
Methuen	0.0	40.4	46.8	12.8	8	17.0
New Bedford	7.1	58.4	34.1	7.5	39	17.4
Pittsfield	11.9	64.4	22.0	13.6	15	25.4
Plymouth	5.3	57.9	31.6	10.5	4	**
Quincy	10.5	81.1	13.5	5.4	2	**
Revere	4.2	61.4	29.5	9.1	8	16.7
Somerville	10.3	66.7	24.6	8.8	9	15.5
Southbridge	8.3	72.3	23.4	4.3	15	31.3
Springfield	11.2	51.1	39.1	9.8	126	25.5
Taunton	5.7	64.3	25.7	10.0	15	21.4
Westfield	7.3	47.5	42.5	10.0	5	12.2
Worcester	10.6	59.3	29.8	10.8	67	20.9

Source: Registry of Vital Records and Statistics, MDPH, 1997.

** Percentages were not calculated for fewer than five observations.

[1] 25 communities with the greatest number of births to teens ages 12-19. In 1997, there were 27 communities due to ties in the numbers of teen births

[2] Adequacy of Prenatal Care is determined by a calculation that combines trimester of prenatal care registration with the number of prenatal care visits. See technical Notes and Glossary for further information and definitions.

[3] Multiparous mothers have had at least one previous live birth.

[4] Percentages exclude case with unknown values for these categories.

Table 27.
Expected Educational Attainment and In-Hospital Paternity[1] Acknowledgment among Teen Mothers for Selected Communities[2]
Massachusetts: 1997

	Behind Grade Level[3]		Paternity Acknowledgment
Community	Number	Percent	Percent
Massachusetts	**1,744**	**29.7**	**66.0**
Barnstable	10	26.3	64.7
Boston	191	23.2	51.6
Brockton	53	26.1	55.3
Cambridge	11	20	60.4
Chelsea	41	44.6	73.5
Chicopee	18	28.1	66.7
Fall River	45	32.1	72.8
Fitchburg	34	38.2	59.7
Framingham	24	38.7	80.8
Haverhill	33	37.5	63.9
Holyoke	82	44.6	68.3
Lawrence	116	40.1	68.1
Leominster	17	38.6	74.3
Lowell	112	39.9	66.9
Lynn	59	32.1	68.3
Methuen	14	29.8	73.2
New Bedford	61	27.2	72.8
Pittsfield	12	20.3	60.0
Plymouth	9	23.7	62.9
Quincy	7	18.4	68.8
Revere	14	29.2	66.7
Somerville	22	37.9	69.4
Southbridge	20	41.7	75.0
Springfield	176	35.8	62.5
Taunton	18	25.7	78.5
Westfield	13	31.7	81.6
Worcester	113	35.5	62.2

Source: Registry of Vital Records and Statistics, MDPH, 1997.

[1] Paternity acknowledgment: voluntary self-acknowledgment by fathers or acknowledgment through legal action. These data reflect data collected in hospitals, at time of birth, only (see Glossary for further explanation).

[2] 25 communities with the greatest number of births to teens ages 12-19. In 1997, there were 27 communities due to ties in the numbers of teen births.

[3] “Behind Grade Level” is defined as one or more grades behind the maximum expected age for a grade at the time of delivery. See Glossary for explanation

IV.

Birth Characteristics for All 351 MA Communities and the 27 Community Health Network Areas

Table 28.
Number of Births by Mother's Age and Prenatal Care Characteristics
351 Massachusetts Communities: 1997

Community	All Ages	Number of Births		Prenatal Care (<20 Years)	
	Number of Births	< 18 Years	< 20 Years	Number Began in 1st Trimester	Number Paid by Public Funds
Massachusetts	80,321	2,208	5,904	3,747	4,056
Abington	194	0	6	**	**
Acton	245	0	2	**	**
Acushnet	71	2	6	**	**
Adams	92	6	12	10	6
Agawam	321	4	14	10	8
Alford	3	**	**	**	**
Amesbury	222	4	13	9	6
Amherst	178	4	13	7	10
Andover	350	1	2	**	0
Arlington	608	1	6	**	**
Ashburnham	59	0	2	**	0
Ashby	26	0	0	0	0
Ashfield	10	0	0	0	0
Ashland	267	1	2	**	0
Athol	138	7	19	11	11
Attleboro	585	13	36	24	24
Auburn	156	0	3	**	0
Avon	41	1	3	**	**
Ayer	117	2	8	**	6
Barnstable	484	9	38	21	28
Barre	66	1	1	**	**
Becket	19	0	0	0	0
Bedford	250	2	2	0	0
Belchertown	177	1	5	**	**
Bellingham	220	1	11	7	**

Table 28. (Continued)
Number of Births by Mother's Age and Prenatal Care Characteristics
351 Massachusetts Communities: 1997

Community	All Ages	Number of Births		Prenatal Care (<20 Years)	
	Number of Births	< 18 Years	< 20 Years	Number Began in 1st Trimester	Number Paid by Public Funds
Belmont	282	0	2	**	**
Berkley	76	0	0	0	0
Berlin	27	1	2	**	**
Bernardston	16	0	2	**	**
Beverly	518	10	26	17	14
Billerica	565	2	11	7	**
Blackstone	98	1	4	**	**
Blandford	7	0	**	**	**
Bolton	48	0	0	0	0
Boston	7,822	350	840	569	643
Bourne	247	3	15	11	8
Boxborough	62	0	0	0	0
Boxford	97	0	1	**	**
Boylston	39	0	1	**	**
Braintree	386	5	13	12	**
Brewster	68	0	2	**	0
Bridgewater	285	4	10	6	**
Brimfield	43	0	2	0	**
Brockton	1,429	82	204	121	146
Brookfield	44	1	2	**	0
Brookline	599	3	6	0	**
Buckland	13	0	0	0	0
Burlington	326	1	6	**	**
Cambridge	1,015	20	55	34	34
Canton	263	1	6	5	**
Carlisle	60	0	0	0	0

Table 28. (Continued)
Number of Births by Mother's Age and Prenatal Care Characteristics
351 Massachusetts Communities: 1997

Community	All Ages	Number of Births		Prenatal Care (<20 Years)	
	Number of Births	< 18 Years	< 20 Years	Number Began in 1st Trimester	Number Paid by Public Funds
Carver	119	1	11	10	6
Charlemont	15	1	2	**	**
Charlton	164	4	12	7	**
Chatham	44	1	3	**	**
Chelmsford	462	1	3	**	**
Chelsea	619	34	93	61	57
Cheshire	36	1	1	**	**
Chester	11	0	0	0	0
Chesterfield	9	0	0	0	0
Chicopee	552	19	64	36	49
Chilmark	11	0	0	0	0
Clarksburg	10	1	2	**	**
Clinton	171	5	17	11	13
Cohasset	78	0	0	0	0
Colrain	21	0	0	0	0
Concord	164	0	2	**	**
Conway	19	0	1	**	**
Cummington	12	1	2	**	**
Dalton	62	3	3	**	**
Danvers	243	0	4	**	**
Dartmouth	228	4	11	8	10
Dedham	298	4	12	9	8
Deerfield	50	0	1	**	**
Dennis	131	4	6	0	**
Dighton	66	0	3	**	**
Douglas	113	0	2	**	**

Table 28. (Continued)
Number of Births by Mother's Age and Prenatal Care Characteristics
351 Massachusetts Communities: 1997

Community	All Ages	Number of Births		Prenatal Care (<20 Years)	
	Number of Births	< 18 Years	< 20 Years	Number Began in 1st Trimester	Number Paid by Public Funds
Dover	90	0	1	**	**
Dracut	387	4	15	14	9
Dudley	101	3	8	5	**
Dunstable	45	0	0	0	0
Duxbury	174	1	2	**	0
East Bridgewater	164	0	3	**	**
East Brookfield	18	1	2	**	0
East Longmeadow	162	3	4	**	**
Eastham	34	0	3	**	**
Easthampton	177	7	18	15	7
Easton	274	5	10	7	**
Edgartown	48	0	1	**	**
Egremont	7	0	**	**	**
Erving	16	0	3	**	**
Essex	43	0	2	**	0
Everett	542	9	26	17	19
Fairhaven	169	4	10	6	**
Fall River	1,109	46	141	78	96
Falmouth	277	9	27	18	19
Fitchburg	513	32	89	57	57
Florida	9	0	0	0	0
Foxborough	219	0	2	**	**
Framingham	953	22	62	49	26
Franklin	530	2	8	8	6
Freetown	98	4	8	**	**
Gardner	217	11	33	26	18

Table 28. (Continued)
Number of Births by Mother's Age and Prenatal Care Characteristics
351 Massachusetts Communities: 1997

Community	All Ages	Number of Births		Prenatal Care (<20 Years)	
	Number of Births	< 18 Years	< 20 Years	Number Began in 1st Trimester	Number Paid by Public Funds
Gay Head	2	0	0	0	0
Georgetown	106	0	1	**	**
Gill	14	0	0	0	0
Gloucester	353	10	27	24	19
Goshen	3	0	0	0	0
Gosnold	0	0	0	0	0
Grafton	202	1	8	6	**
Granby	65	0	2	**	**
Granville	16	0	1	**	**
Great Barrington	76	1	3	**	**
Greenfield	197	6	17	11	12
Groton	163	1	3	**	0
Groveland	97	0	1	**	**
Hadley	50	3	5	**	**
Halifax	89	1	4	**	0
Hamilton	105	1	4	**	**
Hampden	36	1	1	**	**
Hancock	7	0	**	**	**
Hanover	171	1	2	**	**
Hanson	159	4	8	5	**
Hardwick	28	3	4	**	**
Harvard	53	0	0	0	0
Harwich	88	4	8	5	**
Hatfield	35	0	1	**	**
Haverhill	858	31	88	59	69
Hawley	6	0	0	0	0

Table 28. (Continued)
Number of Births by Mother's Age and Prenatal Care Characteristics
351 Massachusetts Communities: 1997

Community	All Ages	Number of Births		Prenatal Care (<20 Years)	
	Number of Births	< 18 Years	< 20 Years	Number Began in 1st Trimester	Number Paid by Public Funds
Heath	4	0	0	0	0
Hingham	284	1	2	**	0
Hinsdale	27	0	1	**	**
Holbrook	117	5	7	**	**
Holden	170	0	1	**	**
Holland	32	0	2	**	**
Holliston	175	0	0	0	0
Holyoke	708	72	184	124	164
Hopedale	65	0	0	0	0
Hopkinton	229	1	3	**	**
Hubbardston	58	1	2	0	**
Hudson	237	4	17	15	6
Hull	161	2	11	8	5
Huntington	28	0	3	**	**
Ipswich	129	3	3	**	0
Kingston	190	0	5	**	**
Lakeville	131	2	6	**	**
Lancaster	62	0	3	**	**
Lanesborough	27	1	2	**	**
Lawrence	1,313	131	289	162	213
Lee	51	0	0	0	0
Leicester	120	4	11	7	**
Lenox	29	0	1	**	**
Leominster	574	14	45	23	29
Leverett	8	0	0	0	0
Lexington	286	1	3	**	**

Table 28. (Continued)
Number of Births by Mother's Age and Prenatal Care Characteristics
351 Massachusetts Communities: 1997

Community	All Ages	Number of Births		Prenatal Care (<20 Years)	
	Number of Births	< 18 Years	< 20 Years	Number Began in 1st Trimester	Number Paid by Public Funds
Leyden	12	0	0	0	0
Lincoln	56	0	0	0	0
Littleton	145	0	0	0	0
Longmeadow	144	1	1	**	**
Lowell	1,691	128	281	167	228
Ludlow	165	5	12	**	7
Lunenburg	104	2	3	**	**
Lynn	1,356	69	186	124	158
Lynnfield	115	0	1	**	**
Malden	783	10	34	21	22
Manchester By The Sea	58	0	1	**	**
Mansfield	401	1	7	6	**
Marblehead	236	0	1	**	**
Marion	52	0	1	**	**
Marlborough	518	10	31	18	17
Marshfield	353	6	11	9	**
Mashpee	153	4	10	**	7
Mattapoisett	53	1	1	**	**
Maynard	170	1	6	5	**
Medfield	182	0	1	**	**
Medford	630	5	19	14	9
Medway	189	3	4	**	**
Melrose	356	2	7	**	**
Mendon	73	1	2	**	0
Merrimac	89	1	4	**	**
Methuen	555	23	47	23	23

Table 28. (Continued)
Number of Births by Mother's Age and Prenatal Care Characteristics
351 Massachusetts Communities: 1997

Community	All Ages	Number of Births		Prenatal Care (<20 Years)	
	Number of Births	< 18 Years	< 20 Years	Number Began in 1st Trimester	Number Paid by Public Funds
Middleborough	272	4	14	10	9
Middlefield	3	0	0	0	0
Middleton	72	0	0	0	0
Milford	370	6	17	12	10
Millbury	147	1	7	**	**
Millis	126	0	2	**	**
Millville	43	0	3	**	**
Milton	332	1	6	5	**
Monroe	0	0	0	0	0
Monson	93	1	10	**	5
Montague	87	1	12	6	7
Monterey	4	0	0	0	0
Montgomery	6	**	**	**	**
Mount Washington	4	0	0	0	0
Nahant	36	0	0	0	0
Nantucket	110	1	1	**	**
Natick	510	3	9	7	**
Needham	391	0	2	**	0
New Ashford	2	0	0	0	0
New Bedford	1,229	88	224	134	169
New Braintree	10	0	0	0	0
New Marlborough	8	0	0	0	0
New Salem	10	0	1	**	**
Newbury	73	0	0	0	0
Newburyport	197	7	9	6	8
Newton	832	2	6	**	**

Table 28. (Continued)
Number of Births by Mother's Age and Prenatal Care Characteristics
351 Massachusetts Communities: 1997

Community	All Ages	Number of Births		Prenatal Care (<20 Years)	
	Number of Births	< 18 Years	< 20 Years	Number Began in 1st Trimester	Number Paid by Public Funds
Norfolk	152	1	1	**	**
North Adams	174	9	28	23	19
North Andover	345	2	7	**	**
North Attleborough	386	6	14	8	**
North Brookfield	46	3	6	**	**
North Reading	206	0	0	0	0
Northampton	240	3	19	12	15
Northborough	193	0	3	**	0
Northbridge	227	3	12	6	9
Northfield	28	0	1	**	**
Norton	253	6	11	**	5
Norwell	95	0	1	**	**
Norwood	333	3	8	**	**
Oak Bluffs	43	0	1	**	**
Oakham	17	1	2	**	**
Orange	98	4	13	6	11
Orleans	28	0	0	0	0
Otis	9	0	0	0	0
Oxford	165	5	17	11	6
Palmer	134	5	15	13	11
Paxton	40	0	2	0	**
Peabody	569	4	12	8	8
Pelham	12	0	0	0	0
Pembroke	296	0	8	6	**
Pepperell	150	2	4	**	**
Peru	8	0	0	0	0

Table 28. (Continued)
Number of Births by Mother's Age and Prenatal Care Characteristics
351 Massachusetts Communities: 1997

Community	All Ages	Number of Births		Prenatal Care (<20 Years)	
	Number of Births	< 18 Years	< 20 Years	Number Began in 1st Trimester	Number Paid by Public Funds
Petersham	10	0	0	0	0
Phillipston	13	0	1	**	**
Pittsfield	535	23	59	45	46
Plainfield	4	0	**	**	**
Plainville	95	0	1	**	**
Plymouth	677	13	38	24	24
Plympton	30	1	3	**	**
Princeton	26	0	0	0	0
Provincetown	17	2	4	**	**
Quincy	1,077	10	38	31	20
Randolph	378	5	13	9	6
Raynham	142	2	7	5	**
Reading	347	0	2	**	0
Rehoboth	98	1	2	0	**
Revere	589	21	48	29	35
Richmond	12	0	1	**	**
Rochester	36	0	2	**	**
Rockland	246	4	11	8	9
Rockport	85	1	5	**	**
Rowe	6	0	0	0	0
Rowley	76	2	4	**	0
Royalston	10	0	1	**	**
Russell	24	0	1	**	**
Rutland	94	0	1	**	**
Salem	475	13	35	26	22
Salisbury	85	3	9	**	6

Table 28. (Continued)
Number of Births by Mother's Age and Prenatal Care Characteristics
351 Massachusetts Communities: 1997

Community	All Ages	Number of Births		Prenatal Care (<20 Years)	
	Number of Births	< 18 Years	< 20 Years	Number Began in 1st Trimester	Number Paid by Public Funds
Sandisfield	8	0	0	0	0
Sandwich	253	0	4	**	**
Saugus	276	1	5	**	**
Savoy	6	**	**	**	**
Scituate	229	1	2	**	**
Seekonk	129	1	2	**	**
Sharon	238	0	1	**	**
Sheffield	42	0	1	**	**
Shelburne	21	0	2	0	**
Sherborn	44	0	1	**	**
Shirley	64	3	7	**	**
Shrewsbury	445	1	5	**	**
Shutesbury	17	0	0	0	0
Somerset	113	2	6	**	**
Somerville	925	25	58	41	42
South Hadley	157	4	11	8	**
Southampton	59	0	0	0	0
Southborough	151	1	3	**	**
Southbridge	243	11	48	36	29
Southwick	101	0	3	**	**
Spencer	133	6	14	13	6
Springfield	2,327	215	494	283	427
Sterling	85	0	2	**	0
Stockbridge	7	0	**	**	**
Stoneham	262	3	5	**	**
Stoughton	305	4	23	16	8

Table 28. (Continued)
Number of Births by Mother's Age and Prenatal Care Characteristics
351 Massachusetts Communities: 1997

Community	All Ages	Number of Births		Prenatal Care (<20 Years)	
	Number of Births	< 18 Years	< 20 Years	Number Began in 1st Trimester	Number Paid by Public Funds
Stow	90	0	1	**	**
Sturbridge	86	2	5	**	**
Sudbury	214	1	3	**	**
Sunderland	36	0	2	**	**
Sutton	104	1	1	**	**
Swampscott	173	0	2	**	**
Swansea	145	7	13	8	**
Taunton	771	20	70	49	54
Templeton	85	1	7	5	6
Tewksbury	425	1	9	5	5
Tisbury	27	0	2	**	**
Tolland	4	0	0	0	0
Topsfield	59	0	0	0	0
Townsend	106	0	5	**	**
Truro	13	0	0	0	0
Tyngsborough	183	3	9	5	**
Tyringham	2	0	0	0	0
Upton	120	1	2	**	**
Uxbridge	175	2	7	5	**
Wakefield	339	0	4	**	**
Wales	17	0	0	0	0
Walpole	285	3	4	**	**
Waltham	666	11	30	15	15
Ware	96	5	13	9	7
Wareham	236	6	26	20	16
Warren	47	1	7	**	5

Table 28. (Continued)
Number of Births by Mother's Age and Prenatal Care Characteristics
351 Massachusetts Communities: 1997

Community	All Ages	Number of Births		Prenatal Care (<20 Years)	
	Number of Births	< 18 Years	< 20 Years	Number Began in 1st Trimester	Number Paid by Public Funds
Warwick	9	**	**	**	**
Washington	7	0	**	**	**
Watertown	378	0	0	0	0
Wayland	186	1	1	**	**
Webster	200	5	18	8	13
Wellesley	327	0	2	**	0
Wellfleet	17	1	1	**	**
Wendell	8	0	0	0	0
Wenham	29	0	0	0	0
West Boylston	70	1	4	**	**
West Bridgewater	55	2	3	**	**
West Brookfield	37	1	3	**	**
West Newbury	54	0	1	**	**
West Springfield	324	10	29	18	23
West Stockbridge	9	0	0	0	0
West Tisbury	23	0	0	0	0
Westborough	220	3	3	**	0
Westfield	432	18	41	23	26
Westford	336	2	4	**	**
Westhampton	18	0	0	0	0
Westminster	79	1	3	**	0
Weston	136	0	0	0	0
Westport	142	0	6	**	**
Westwood	179	1	2	**	0
Weymouth	763	8	32	19	11
Whately	20	0	1	**	**

Table 28. (Continued)
Number of Births by Mother's Age and Prenatal Care Characteristics 351 Massachusetts Communities: 1997

Community	All Ages	Number of Births		Prenatal Care (<20 Years)	
	Number of Births	< 18 Years	< 20 Years	Number Began in 1st Trimester	Number Paid by Public Funds
Whitman	188	2	7	7	5
Wilbraham	99	0	1	**	**
Williamsburg	17	0	0	0	0
Williamstown	49	0	1	**	**
Wilmington	334	3	7	5	0
Winchendon	125	13	29	21	13
Winchester	244	2	4	**	0
Windsor	10	0	0	0	0
Winthrop	207	2	9	5	8
Woburn	483	5	14	7	6
Worcester	2,330	122	320	195	242
Worthington	16	1	1	**	**
Wrentham	147	0	4	**	**
Yarmouth	218	8	21	11	11

Source: Registry of Vital Records and Statistics, MDPH, 1997.

** For communities where "Number of Births to All Ages" is less than 10, cells with values of 1-4 are suppressed. For all communities, "Prenatal Care (< 20 Years)" cells with values of 1-4 suppressed. For communities where the number of teen births ("<20 Years") equals one, prenatal care cells are suppressed. Cells have also been suppressed in those instances where the publication of cell values would lead to inadvertent identification of individuals.

Table 29.
Number of Births by Mother's Age and Prenatal Care Characteristics
27 Community Health Network Areas[1]: 1997

	Community Health Network Areas (CHNA)	All Ages	Teens			
			Number of Births		Prenatal Care (< 20 Years)	
		Number of Births	< 18 Years	< 20 Years	Number Began in 1st Trimester	Number Paid by Public Funds
	Massachusetts	80,321	2,208	5,904	3,747	4,036
1	Community Health Network of Berkshire County	1,351	47	121	93	85
2	Upper Valley Health Web (Franklin County)	912	22	82	47	54
3	Partnership for Health in Hampshire County (Greater Northampton Area)	1,328	29	91	65	53
3.1	Four (For) Communities (Greater Holyoke)	1,896	114	304	187	247
4	The Community Health Connection (Greater Springfield Area)	3,798	241	576	335	482
5	Greater Southbridge Community Health Network	1,376	43	146	98	74
6	Community Partners for Health (Greater Milford Area)	2,327	21	73	52	39
7	Community Health Partners of Greater Metro West (Greater Framingham Area)	5,363	52	160	118	70
8	Community Wellness Coalition (Greater Worcester Area)	3,719	130	362	221	253
9	Fitchburg/Gardner Community Health Network	3,127	94	272	172	161
10	Greater Lowell Community Health Network	4,094	141	332	204	251
11	Greater Lawrence Community Health Network	2,635	157	345	191	239
12	Greater Haverhill Community Health Network	1,954	48	131	84	95
13	Greater Beverly/Gloucester Community Health Network	1,379	25	68	50	37
14	North Shore Community Health Network	3,479	87	246	168	191
15	Greater Woburn/Concord/Littleton Community Health Network	2,655	14	40	21	11
16	North Suburban Health Alliance (Medford/Malden/Melrose Area)	3,465	29	97	62	57

Table 29. (Continued)
Number of Births by Mother's Age and Prenatal Care Characteristics 27 Community Health Network Areas[1]: 1997

Community Health Network Areas (CHNA)		All Ages	Teens			
			Number of Births		Prenatal Care (< 20 Years)	
		Number of Births	< 18 Years	< 20 Years	Number Began in 1st Trimester	Number Paid by Public Funds
17	Greater Cambridge/ Somerville Community Health Network	3,208	46	121	81	81
18	West Suburban Health Network (Newton/Waltham Area)	2,919	18	55	31	26
19	Alliance for Community Health (City of Boston/Chelsea/Revere/Winthrop Area)	9,836	410	996	664	735
20	Blue Hills Community Health Alliance (Greater Quincy Area)	4,617	37	133	98	57
22	Greater Brockton Community Health Network	3,052	105	276	170	172
23	South Shore Community Partners in Prevention (Greater Plymouth Area)	2,504	32	103	73	54
24	Health and Education Response (Greater Attleboro/Taunton Area)	3,310	56	172	112	111
25	Partners for a Healthier Community (Greater Fall River Area)	1,509	55	166	93	103
26	Greater New Bedford Community Health Network	2,172	109	289	174	206
27	Cape and Islands Community Health Network	2,336	46	147	83	92

Source: Registry of Vital Records and Statistics, MDPH, 1997.

[1] While the CHNA number designations are no longer used, they are provided in this table to correspond with Community Health Network Area definition and city/town groupings found in the Appendix.

Appendix

Technical Notes

We recommend that the following be kept in mind when examining the data:

- Limitations of small numbers: In cases where there are small numbers of teen births, especially at the city/town level and by race/ethnicity or age, small changes in the numbers from year to year will produce large changes in percentages, making the differences appear more important than they are in reality.

- Missing data: Unless otherwise stated, percentages are based on the number of births or mothers that have *known* information regarding a demographic or birth characteristic.

- Self-reported data: Many items used in this publication, such as number of prenatal care visits, maternal smoking, and type of health insurance coverage, are self-reported and thus subject to the usual limitations of this type of information.

- Calculation of birth rates: Birth rates (number of births per 1,000 women) are calculated using Census counts of the resident population of Massachusetts. Because the Census is taken only once every ten years, the annual number of residents in each city/town and in the state for non-Census years are projected estimates, not actual counts. Therefore, the numbers of resident women may be underestimated (resulting in inflated birth rates), or overestimated (resulting in lower birth rates). The population estimates for 1991-1996 were revised in June 1997. As a result, the birth rates for these years were recalculated. Reporting of the revised birth rates began in last year's publication (*Adolescent Births: Statistical Profile, Massachusetts 1996*).

- Calculation of infant mortality rates (IMR) for teenage mothers: Death certificates record only the age of the decedent, not that of the mother. To know which infants who died before their first birthday had a teenage mother, it is necessary to link the infant death certificates to their birth certificates. Each year, the Registry of Vital Statistics creates such a file, called the Linked Birth/Infant Death file. All births in a calendar year are linked to all infant deaths occurring within one year of the date of birth, which may be in the same calendar year as the year of birth or in the following year. For example, if an infant is born on June 30, 1997 and dies on March 1, 1998, that infant would be included in the 1997 linked file because he/she was born in 1997 and died before reaching one year of age. The 1997 infant mortality rate for women under the age of 20 will not be available until the 1997 linked birth/infant death file is complete. Therefore, the 1996 maternal age-specific infant mortality rate is the most recent available and is included in this report.

  Since infant mortality rates in this report are calculated using data from the linked birth/infant death file, they are not comparable to the rates published in *Advance Data: Births*, which uses the standard method to calculate IMRs (number of infant deaths in a year per 1,000 live births delivered in the same year).

- Change in the calculation of expected educational attainment: Data in this report should not be compared with previous reports. Prior to 1997, expected level of educational attainment (see *Glossary* for further explanation) was calculated differently for US-born and foreign-born teenage mothers. Beginning with this report, the same age-for-grade cutoffs were used regardless of maternal place of birth.

- Change in gestational age categories: Beginning with this report, full-term infants are defined as having been born between 37 and 42 completed weeks of gestation. Prior to 1997, full-term infants were defined as having gestational ages between 37 and 41 completed weeks gestation. Therefore, caution should be used in comparing 1997 data with prior years' data.

- Change in categorization of prenatal care source of payment: Beginning with this report, free care is included in public source of payment for prenatal care. Prior to 1997, free care was included in other sources of payment. There was no change in the definition of private sources of payment; therefore, the data for private pay mothers are comparable with prior reports.

- Community Health Network Areas (CHNAs): The data published in this report reflect the new definitions of CHNAs instituted in January 1997. See *Glossary* for further definition.

Glossary

Adequacy of Prenatal Care: Adequacy of prenatal care is calculated from information reported by the birth hospital on the birth certificate. The index of Adequacy of Prenatal Care (based on the Kessner Index) used in this report has three categories (adequate, intermediate, inadequate/none). These categories are based on the trimester in which prenatal care began and the number of prenatal visits. The general classification scheme for full-term infants is as follows:

Category	Trimester Care Began	Number of Visits
Adequate	1	9 or more
Intermediate	1	5-8
	2	5 or more
Inadequate/None	1	1-4
	2	1-4
	3	1 or more
	--	0

The classification is adjusted for gestational age to allow for proper classification of premature infants. *See Foreword.*

Birth Rate: see Teen Birth Rate.

Birthweight Categories: The weight of an infant recorded at the time of delivery.

Normal Birthweight (NBW):	An infant's weight of 2,500 grams (5.5 pounds) or more
Low Birthweight (LBW):	An infant's weight of less than 2,500 grams (5.5 pounds)
Very Low Birthweight (VLBW):	An infant's weight of less than 1,500 grams (3.3 pounds)

Community Health Network Area (CHNA): The Department of Public Health, in collaboration with health service providers, coalition members, and interested citizens, has designated 27 areas for community health planning. Coalitions in each CHNA address the health needs of the community through development of strategies, monitoring of outcomes and the progress of the strategies and responses to those health needs. A CHNA is defined as an aggregation of cities and towns (the City of Boston constitutes its own CHNA). The table at the end of the Appendix provides a list of the 351 cities and towns with the corresponding CHNA number.

Education: Education is self-reported on the birth certificate by the mother and indicates the highest grade or total number of years of schooling she has completed.

Ethnicity: Mother's ethnicity is self-reported on the birth certificate.

Expected Educational Attainment: The maximum expected age of a student in a particular school grade. Teen mothers were classified as being at least one grade behind if they were two or more years older than the maximum expected age for the reported grade level. For example, if a teen is 16 years old and reports she has completed eighth grade, then she is at least one year behind the expected age for that grade. The following age-for-grade cutoffs were used:

Grade	Maximum Expected Age
6th	12
7th	13
8th	14
9th	15
10th	16
11th	17
12th	18

Gestational Age: The duration of pregnancy measured by number of completed weeks gestation. In this publication, the clinical estimate of gestational age has been used for analysis. Clinical gestational age is determined by the attendant at birth or a physician providing postnatal care to the newborn and is reported on the birth certificate. A normal gestational age is defined as delivery between the completion of the 37th and the 42nd week of pregnancy.

Healthy Start: Healthy Start is a Massachusetts-funded program providing services and financing for prenatal care to low-income (up to 200% of the poverty level in 1997) pregnant women who lack health insurance but do not qualify for Mass Health (Medicaid).

Infant Mortality: See Mortality Categories.

Infant Mortality Rate (IMR): See Mortality Rate Categories

Live Birth: A live birth is defined as any infant who breathes or shows any other evidence of life after delivery (such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles), regardless of duration of gestation or birthweight. All figures and tables in this report, showing Massachusetts data, are based on live births to Massachusetts residents (see Resident Birth).

Low Birthweight (LBW): see Birthweight Categories.

Mortality Categories:

Infant Mortality: The death of a child under 1 year of age (<=364 days old).
Neonatal Mortality: The death of an infant less than 28 days old.
Post Neonatal Mortality: The death of an infant between 28 and 364 days after birth.

Mortality Rate Categories:

Infant Mortality Rate (IMR): The death rate among infants less than one year old per 1,000 live births.
Neonatal Mortality Rate (NMR): The death rate among newborns less than 28 days old per 1,000 live births.
Post Neonatal Mortality Rate (PNMR): The death rate among infants 28-364 days old per 1,000 live births.

Mother's Age: Mother's age is computed from her date of birth and the date of delivery.

Multiparous: A multiparous mother is one who has had at least one prior live birth.

Neonatal Mortality: see Mortality Categories.

Neonatal Mortality Rate (NMR): See Mortality Rate Categories.

Normal Birthweight (NBW): see Birthweight Categories.

Parity: The number of live infants ever born to the mother. Parity includes all previous live births as well as the infant named on the birth certificate.

Paternity Acknowledgement: The process by which the paternity of an infant is legally established when the parents are unmarried. As part of the birth registration process, unmarried parents sign an acknowledgement form and their signatures are notarized. The father's information is then added to the child's birth certificate. Paternity can also be acknowledged at a town clerk's office after the mother and child have been discharged from the hospital. Paternity may be established through legal action or through voluntary acknowledgement in the case of unmarried couples; when a couple is married, the husband is legally considered the infant's father. *Paternity acknowledgement data in this report reflect acknowledgments made in hospitals at the time of birth only.*

Postneonatal Mortality: see Mortality Categories.

Post Neonatal Mortality Rate (PNMR): See Mortality Rate Categories.

Prenatal Care Payment Source: Prenatal care payment source is self-reported by the mother. Two groupings are used in this report:

Private:	Blue Cross/Blue Shield, commercial insurance, and health maintenance organizations (HMOs). The HMO category may include Mass Health (Medicaid) recipients in managed care programs.
Public:	Mass Health (Medicaid), Healthy Start, Medicare, free care, and other government sources.

Race/Hispanic Ethnicity: Mother's race and Hispanic ethnicity are self-reported.

Resident Birth: The birth of an infant whose mother reports her usual place of residence as Massachusetts. In Massachusetts, a resident is a person with a permanent address in one of the 351 cities or towns. Massachusetts resident births include all births that occur among residents of the Commonwealth whether they occur in Massachusetts or elsewhere.

Teen Birth Rate: The number of children born among females ages 15 to 19 divided by the population of females in that age group, multiplied by 1,000.

Very Low Birthweight (VLBW): see Birthweight Categories.

1997 Population Estimates of Females Ages 15 to 19 Years Living in the 25 Massachusetts Communities* with the Highest Number of Teen Births in 1997

Community	Estimated Number of Females, Ages 15-19 years
Massachusetts	*171,809*
Barnstable	958
Boston	17,419
Brockton	2,733
Cambridge	3,068
Chelsea	979
Chicopee	1,684
Fall River	2,637
Fitchburg	1,596
Framingham	1,624
Haverhill	1,424
Holyoke	1,896
Lawrence	3,414
Leominster	1,041
Lowell	3,621
Lynn	2,467
Methuen	754
New Bedford	3,328
Pittsfield	853
Plymouth	1,453
Quincy	1,314
Revere	494
Somerville	1,754
Southbridge	523
Springfield	5,784
Taunton	1,372
Westfield	1,483
Worcester	5,975

Source: 1997 estimates extrapolated from MISER estimates. See Foreword for further information.

* 27 communities are listed because of ties in the numbers of teen births.

Massachusetts Cities, Towns, Counties, and Community Health Network Areas (CHNAs)

City/Town	County	CHNA	City/Town	County	CHNA
Abington	Plymouth	22	Dartmouth	Bristol	26
Acton	Middlesex	15	Dedham	Norfolk	18
Acushnet	Bristol	26	Deerfield	Franklin	2
Adams	Berkshire	1	Dennis	Barnstable	27
Agawam	Hampden	4	Dighton	Bristol	24
Alford	Berkshire	1	Douglas	Worcester	6
Amesbury	Essex	12	Dover	Norfolk	18
Amherst	Hampshire	3	Dracut	Middlesex	10
Andover	Essex	11	Dudley	Worcester	5
Arlington	Middlesex	17	Dunstable	Middlesex	10
Ashburnham	Worcester	9	Duxbury	Plymouth	23
Ashby	Middlesex	9	East Bridgewater	Plymouth	22
Ashfield	Franklin	2	East Brookfield	Worcester	5
Ashland	Middlesex	7	East Longmeadow	Hampden	4
Athol	Worcester	2	Eastham	Barnstable	27
Attleboro	Bristol	24	Easthampton	Hampshire	3
Auburn	Worcester	8	Easton	Bristol	22
Avon	Norfolk	22	Edgartown	Dukes	27
Ayer	Middlesex	9	Egremont	Berkshire	1
Barnstable	Barnstable	27	Erving	Franklin	2
Barre	Worcester	9	Essex	Essex	13
Becket	Berkshire	1	Everett	Middlesex	16
Bedford	Middlesex	15	Fairhaven	Bristol	26
Belchertown	Hampshire	3	Fall River	Bristol	25
Bellingham	Norfolk	6	Falmouth	Barnstable	27
Belmont	Middlesex	17	Fitchburg	Worcester	9
Berkley	Bristol	24	Florida	Berkshire	1
Berlin	Worcester	9	Foxborough	Norfolk	7
Bernardston	Franklin	2	Framingham	Middlesex	7
Beverly	Essex	13	Franklin	Norfolk	6
Billerica	Middlesex	10	Freetown	Bristol	26
Blackstone	Worcester	6	Gardner	Worcester	9
Blandford	Hampden	4	Gay Head	Dukes	27
Bolton	Worcester	9	Georgetown	Essex	12
Boston	Suffolk	19	Gill	Franklin	2
Bourne	Barnstable	27	Gloucester	Essex	13
Boxborough	Middlesex	15	Goshen	Hampshire	3
Boxford	Essex	12	Gosnold	Dukes	27
Boylston	Worcester	8	Grafton	Worcester	8
Braintree	Norfolk	20	Granby	Hampshire	3
Brewster	Barnstable	27	Granville	Hampden	4
Bridgewater	Plymouth	22	Great Barrington	Berkshire	1
Brimfield	Hampden	5	Greenfield	Franklin	2
Brockton	Plymouth	22	Groton	Middlesex	9
Brookfield	Worcester	5	Groveland	Essex	12
Brookline	Norfolk	19	Hadley	Hampshire	3
Buckland	Franklin	2	Halifax	Plymouth	23
Burlington	Middlesex	15	Hamilton	Essex	13
Cambridge	Middlesex	17	Hampden	Hampden	4
Canton	Norfolk	20	Hancock	Berkshire	1
Carlisle	Middlesex	15	Hanover	Plymouth	23
Carver	Plymouth	23	Hanson	Plymouth	23
Charlemont	Franklin	2	Hardwick	Worcester	9
Charlton	Worcester	5	Harvard	Worcester	9
Chatham	Barnstable	27	Harwich	Barnstable	27
Chelmsford	Middlesex	10	Hatfield	Hampshire	3
Chelsea	Suffolk	19	Haverhill	Essex	12
Cheshire	Berkshire	1	Hawley	Franklin	2
Chester	Hampden	3.1	Heath	Franklin	2
Chesterfield	Hampshire	3	Hingham	Plymouth	20
Chicopee	Hampden	3.1	Hinsdale	Berkshire	1
Chilmark	Dukes	27	Holbrook	Norfolk	22
Clarksburg	Berkshire	1	Holden	Worcester	8
Clinton	Worcester	9	Holland	Hampden	5
Cohasset	Norfolk	20	Holliston	Middlesex	7
Colrain	Franklin	2	Holyoke	Hampden	3.1
Concord	Middlesex	15	Hopedale	Worcester	6
Conway	Franklin	2	Hopkinton	Middlesex	7
Cummington	Hampshire	3	Hubbardston	Worcester	9
Dalton	Berkshire	1	Hudson	Middlesex	7
Danvers	Essex	14	Hull	Plymouth	20

City/Town	County	CHNA	City/Town	County	CHNA
Huntington	Hampshire	3.1	Northampton	Hampshire	3
Ipswich	Essex	13	Northborough	Worcester	7
Kingston	Plymouth	23	Northbridge	Worcester	6
Lakeville	Plymouth	24	Northfield	Franklin	2
Lancaster	Worcester	9	Norton	Bristol	24
Lanesborough	Berkshire	1	Norwell	Plymouth	20
Lawrence	Essex	11	Norwood	Norfolk	20
Lee	Berkshire	1	Oak Bluffs	Dukes	27
Leicester	Worcester	8	Oakham	Worcester	9
Lenox	Berkshire	1	Orange	Franklin	2
Leominster	Worcester	9	Orleans	Barnstable	27
Leverett	Franklin	2	Otis	Berkshire	1
Lexington	Middlesex	15	Oxford	Worcester	5
Leyden	Franklin	2	Palmer	Hampden	4
Lincoln	Middlesex	15	Paxton	Worcester	8
Littleton	Middlesex	15	Peabody	Essex	14
Longmeadow	Hampden	4	Pelham	Hampshire	3
Lowell	Middlesex	10	Pembroke	Plymouth	23
Ludlow	Hampden	3.1	Pepperell	Middlesex	9
Lunenburg	Worcester	9	Peru	Berkshire	1
Lynn	Essex	14	Petersham	Worcester	2
Lynnfield	Essex	14	Phillipston	Worcester	2
Malden	Middlesex	16	Pittsfield	Berkshire	1
Manchester	Essex	13	Plainfield	Hampshire	3
Mansfield	Bristol	24	Plainville	Norfolk	7
Marblehead	Essex	14	Plymouth	Plymouth	23
Marion	Plymouth	26	Plympton	Plymouth	23
Marlborough	Middlesex	7	Princeton	Worcester	9
Marshfield	Plymouth	23	Provincetown	Barnstable	27
Mashpee	Barnstable	27	Quincy	Norfolk	20
Mattapoisett	Plymouth	26	Randolph	Norfolk	20
Maynard	Middlesex	7	Raynham	Bristol	24
Medfield	Norfolk	7	Reading	Middlesex	14
Medford	Middlesex	16	Rehoboth	Bristol	24
Medway	Norfolk	6	Revere	Suffolk	19
Melrose	Middlesex	14	Richmond	Berkshire	1
Mendon	Worcester	6	Rochester	Plymouth	26
Merrimac	Essex	12	Rockland	Plymouth	23
Methuen	Essex	11	Rockport	Essex	13
Middleborough	Plymouth	24	Rowe	Franklin	2
Middlefield	Hampshire	3	Rowley	Essex	12
Middleton	Essex	11	Royalston	Worcester	2
Milford	Worcester	6	Russell	Hampden	4
Millbury	Worcester	8	Rutland	Worcester	9
Millis	Norfolk	7	Salem	Essex	14
Millville	Worcester	6	Salisbury	Essex	12
Milton	Norfolk	20	Sandisfield	Berkshire	1
Monroe	Franklin	2	Sandwich	Barnstable	27
Monson	Hampden	4	Saugus	Essex	14
Montague	Franklin	2	Savoy	Berkshire	1
Monterey	Berkshire	1	Scituate	Plymouth	20
Montgomery	Hampden	4	Seekonk	Bristol	24
Mt. Washington	Berkshire	1	Sharon	Norfolk	20
Nahant	Essex	14	Sheffield	Berkshire	1
Nantucket	Nantucket	27	Shelburne	Franklin	2
Natick	Middlesex	7	Sherborn	Middlesex	7
Needham	Norfolk	18	Shirley	Middlesex	9
New Ashford	Berkshire	1	Shrewsbury	Worcester	8
New Bedford	Bristol	26	Shutesbury	Franklin	2
New Braintree	Worcester	9	Somerset	Bristol	25
New Marlborough	Berkshire	1	Somerville	Middlesex	17
New Salem	Franklin	2	South Hadley	Hampshire	3
Newbury	Essex	12	Southampton	Hampshire	3
Newburyport	Essex	12	Southborough	Worcester	7
Newton	Middlesex	18	Southbridge	Worcester	5
Norfolk	Norfolk	7	Southwick	Hampden	4
North Adams	Berkshire	1	Spencer	Worcester	5
North Andover	Essex	11	Springfield	Hampden	4
N. Attleborough	Bristol	24	Sterling	Worcester	9
North Brookfield	Worcester	5	Stockbridge	Berkshire	1
North Reading	Middlesex	14	Stoneham	Middlesex	14

City/Town	County	CHNA
Stoughton	Norfolk	22
Stow	Middlesex	7
Sturbridge	Worcester	5
Sudbury	Middlesex	7
Sunderland	Franklin	2
Sutton	Worcester	6
Swampscott	Essex	14
Swansea	Bristol	25
Taunton	Bristol	24
Templeton	Worcester	9
Tewksbury	Middlesex	10
Tisbury	Dukes	27
Tolland	Hampden	4
Topsfield	Essex	13
Townsend	Middlesex	9
Truro	Barnstable	27
Tyngsborough	Middlesex	10
Tyringham	Berkshire	1
Upton	Worcester	6
Uxbridge	Worcester	6
Wakefield	Middlesex	14
Wales	Hampden	5
Walpole	Norfolk	7
Waltham	Middlesex	18
Ware	Hampshire	3
Wareham	Plymouth	26
Warren	Worcester	5
Warwick	Franklin	2
Washington	Berkshire	1
Watertown	Middlesex	17
Wayland	Middlesex	7
Webster	Worcester	5
Wellesley	Norfolk	18
Wellfleet	Barnstable	27
Wendell	Franklin	2
Wenham	Essex	13
West Boylston	Worcester	8
West Bridgewater	Plymouth	22
West Brookfield	Worcester	5
West Newbury	Essex	12
West Springfield	Hampden	4
West Stockbridge	Berkshire	1
West Tisbury	Dukes	27
Westborough	Worcester	7
Westfield	Hampden	3.1
Westford	Middlesex	10
Westhampton	Hampshire	3
Westminster	Worcester	9
Weston	Middlesex	18
Westport	Bristol	25
Westwood	Norfolk	18
Weymouth	Norfolk	20
Whately	Franklin	2
Whitman	Plymouth	22
Wilbraham	Hampden	4
Williamsburg	Hampshire	3
Williamstown	Berkshire	1
Wilmington	Middlesex	15
Winchendon	Worcester	9
Winchester	Middlesex	15
Windsor	Berkshire	1
Winthrop	Suffolk	19
Woburn	Middlesex	15
Worcester	Worcester	8
Worthington	Hampshire	3
Wrentham	Norfolk	7
Yarmouth	Barnstable	27

Community Health Network Areas

1. Community Health Network of Berkshire
2. Upper Valley health Web (Franklin County)
3. Partnership for Health in Hampshire County (Greater Northampton Area)
3.1 Four (For) Communities (Greater Holyoke)
4. The Community Health Connection (Greater Springfield)
5. Greater Southbridge Community Health Network
6. Community Partners for Health (Greater Milford Area)
7. CHN of Greater Metro West (Greater Framingham Area)
8. Community Wellness Coalition (Greater Worcester)
9. Fitchburg/Gardner Community Health Network
10. Greater Lowell Community Health Network
11. Greater Lawrence Community Health Network
12. Greater Haverhill Community Health Network
13. Greater Beverly/Gloucester CHN
14. North Shore Community Health Network
15. Greater Woburn/Concord/Littleton CHN
16. North Suburban Health Alliance (Malden/Medford/Melrose Area)
17. Greater Cambridge/Somerville CHN
18. West Suburban Health Network (Newton/Waltham)
19. Alliance for Community Health (City of Boston/Chelsea/Revere/Winthrop Area)
20. Blue Hills Community Health Alliance (Greater Quincy Area)
22. Greater Brockton Community Health Network
23. South Shore Community Partners in Prevention (Greater Plymouth Area)
24. Health & Education Response (Greater Attleboro/Taunton Area)
25. Partners for a Healthier Community (Greater Fall River)
26. Greater New Bedford Community Health Network
27. Cape and Islands Community Health Network